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# XI. INSECTA

BY

THE IMPERIAL BUREAU OF ENTOMOLOGY

(Assisted by N. D. RILEY and W. H. T. TAMS).

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- 2a.—**Achard, J.** Notes sur les Scaphidiidae du Musée de Leyde. Zool. Med. Leiden **6** 1921 pp. 84-91. [Col.]
- Acuña, J.** see Brunner & Acuña.
- 3.—**Adamstone, F. B. & Harkness, W. J. K.** The bottom organisms of lake Nipigon. Univ. Toronto Stud. no. 22 1923 pp. 123-170.
- Adensamer** see Schaxel & Adensamer.
- 4.—**Adkin, R.** Migrations of Lepidoptera in regard to the British Isles. S. E. Nat. London **1920** 1920 pp. 41-48.
- 5.—**Adkin, R.** A new variety of *Diaphora mendica*. Trans. Ent. Soc. London **1922** 1923 p. v. [Lep.]
- 6.—**Adkin, R.** *Diacrisia mendica*. Its History and its Variation. Proc. S. London Ent. & Nat. Hist. Soc. **1922-23** 1923 pp. 48-56. [Lep.]
- 7.—**Ainslie, G. G.** The Crambinae of Florida. Florida Ent. Gainesville **6** 1923 pp. 49-55. [Lep.]
- 8.—**Ainslie, G. G.** A corn-feeding Geometrid, *Pleuroprucha insulsaria*, Gaen. (Lep. Geometridae). Ohio J. Sci. Columbus Ohio **23** 1923 pp. 89-101 1 fig.
- 9.—**Aldrich, J. M.** New genera of two-winged flies of the subfamily Leptogastrinae of the family Asilidae. Proc. U. S. Nat. Mus. Washington D.C. **62** art. 20 1923 pp. 1-6 3 figs. [Dipt.]
- 10.—**Aldrich, J. M.** Two Asiatic Muscoid flies parasitic upon the so-called Japanese beetle. Proc. U. S. Nat. Mus. **63** art. 6 1923 pp. 1-4. [Dipt.]
- 11.—**Aldrich, J. M.** A new parasitic fly bred from the bean beetle. Proc. Ent. Soc. Washington **25** 1923 pp. 95-96. [Dipt.]
- 12.—**Aldrich, J. M.** The present status of Coquillett's *Hypochoeta longicornis* Schiner (Diptera). Proc. Ent. Soc. Washington **25** 1923 pp. 161-162.
- 13.—**Aldrich, J. M.** Notes on the Dipterous family Hippoboscidae. Insector Inscitiae Menstruus Washington D.C. **11** 1923 pp. 75-79.
- 14.—**Aldrich, J. M.** The genus *Philornis*—a bird-infesting group of Anthomyiidae. Ann. Ent. Soc. Amer. Columbus Ohio **16** 1923 pp. 304-309 1 fig. [Dipt.]
- 15.—**Aldrich, J. M.** A new Tachinid parasite of the codling moth. Ent. News Philadelphia Pa. **34** 1923 pp. 53-54. [Dipt.]
- 16.—**Aldrich, J. M.** A new sugar-cane miner. Bull. Brooklyn Ent. Soc. **18** 1923 pp. 22-23. [Dipt.]
- 17.—**Aldrich, J. M.** A new genus and species of fly reared from the hoof of the Carabao. Philipp. J. Sci. Manila **22** 1923 pp. 141-142. [Dipt.]
- 18.—**Aldrich, J. M.** Descriptions of lantana gall-fly and lantana seed-fly (Dipt.). Proc. Hawaiian Ent. Soc. Honolulu **1922** 5 1923 pp. 261-263.
- 19.—**Alexander, C. P.** Undescribed crane-flies in the Paris National Museum (Tipulidae, Diptera): Part iv, Asiatic species. Bull. Mus. Hist. nat. Paris **1923** pp. 67-103.
- 20.—**Alexander, C. P.** Insects, Arachnids and Chilopods of the Pribilof Islands, Alaska (Diptera). North Amer. Fauna Washington D.C. no. **46** 1923 pp. 159-169 2 pls.
- 21.—**Alexander, C. P.** Undescribed species of Japanese crane-flies (Tipulidae, Diptera). Part III. Ann. Ent. Soc. Amer. Columbus Ohio **16** 1923 pp. 57-76.

- 22.—Alexander, C. P. Undescribed species of Anisopodidae from New Zealand (Diptera). *Insecutor Inscitiae Menstruus* Washington D.C. **11** 1923 pp. 73–74.
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- 24.—Alexander, C. P. Undescribed crane-flies from Formosa and Luzon (Tipulidae, Diptera). *Philipp. J. Sci. Manila* **22** 1923 pp. 467–481.
- 25.—Alexander, C. P. New or little-known crane-flies from the Hawaiian Islands (Tipulidae, Diptera). *Proc. Hawaiian Ent. Soc. Honolulu* **1922** 5 1923 pp. 249–251.
- 26.—Alexander, C. P. Undescribed species of Australasian and Oriental crane-flies (Tipulidae, Diptera). *Proc. Hawaiian Ent. Soc. Honolulu* **1922** 5 1923 pp. 252–260.
- 27.—Alexander, C. P. Undescribed crane-flies from Argentina (Dipt., Tipulidae). Parts vi–vii, *Ent. News. Philadelphia Pa.* **34** 1923 pp. 181–186 309–313.
- 28.—Alexander (C. P.). Records and descriptions of tropical African crane-flies. (Tipulidae, Diptera.) *Rev. zool. afr. Brussels* **11** 1923 pp. 1–16, 369–383.
- 29.—Alexander, C. P. New or little-known Tipulidae (Diptera). XIII–XVIII. Australian species. *Ann. Mag. Nat. Hist. London* (9) **11** 1923 pp. 97–111 & 193–208; (9) **12** 1923 pp. 97–112, 194–212, 265–281 & 376–393.
- 30.—Alexander, C. P. New or little-known Australian crane-flies (Tipulidae, Diptera). *Proc. R. Soc. Queensland Brisbane* **32** 1920 pp. 92–109.
- 31.—Alfken, J. D. *Andrena enslini*, eine neue deutsche *Andrena*-Art. *Abh. natw. Ver. Bremen* **25** 1921 pp. 63–64. [Hym.]
- 32.—Alfken, J. D. Eine neue deutsche *Halictus*-Art. *Abh. natw. Ver. Bremen* **25** 1921 pp. 87–88. [Hym.]
- 33.—Allen, W. H. R. Protective coloration and mimicry in Insects. *Singapore Nat. no. 2* 1923 pp. 28–33.
- 34.—Alluaud, C. Etude des Carabiques recueillis dans le Sous en mars-avril 1922. *Bull. Soc. Sci. nat. Maroc Rabat* **3** 1923 pp. 11–18 3 figs. [Col.]
- 35.—Alluaud, C. Sur la présence au Maroc d'un Diptère de la famille de Blépharocerides. *Bull. Soc. Sci. nat. Maroc Rabat* **3** 1923 pp. 23–24 3 figs.
- 36.—Alluaud, C. Les *Nebria* du Maroc (Col. Carabidae). *Bull. Soc. Sci. nat. Maroc Rabat* **3** 1923 pp. 150–152.
- 37.—Altson, A. M. On the method of oviposition and the egg of *Lycus brunneus* Steph. *J. Linn. Soc. (Zool.) London* **35** 1923 pp. 217–227 1 pl. 2 figs. [Col.]
- 38.—Alverdes, F. Biologische Beobachtungen an einigen Süßwasser-Arthropoden. *Zool. Anz. Leipzig* **58** 1923 pp. 13–31.
- 39.—Alwarth, K. Coleoptera. Dytiscidae, Gyrinidae. *Ergebn. D. Z. Afr. Exped. 1907–1908 Leipzig* **5** Lief. 5 1921 pp. 441–447 1 pl.
- 40.—Amaduzzi, L. Le scariche elettriche attraversanti l'acqua e la loro azione sul corpo di animali acquatici in essa immersi. *Rend. Acc. Sci. Bologna* **21** 1917 pp. 70–79. [Col., Odon.]
- 41.—Ammann, J. & Knabl, H. Die Käferfauna des nordwestlichen Tirol. *Ent. Blätter Berlin* **19** 1923 pp. 1–16, 49–61.
- 42.—Andres, A. & Seitz, A. Die Lepidopteren-Fauna Aegyptens. *Schenkbergiana Frankfort o. M.* **5** 1923 pp. 1–54, 229–238 1 pl.
- 43.—Andrewes, H. E. Notes on Oriental Carabidae—V. *Ent. Mo. Mag. London* **59** 1923 pp. 95–102. [Col.]
- 44.—Andrewes, H. E. Coleoptera of the Second Mount Everest Expedition, 1922. Part I. Carabidae. *Ann. Mag. Nat. Hist. London* (9) **11** 1923 pp. 273–278.
- 45.—Andrewes, H. E. Papers on Oriental Carabidae. IX–XII. *Ann. Mag. Nat. Hist. London* (9) **11** 1923 pp. 335–344; (9) **12** 1923 pp. 212–223, 442–445, 679–690. [Col.]
- 46.—Andrewes, H. E. Descriptions of some new Carabidae from Ceylon. (Part I.) *Spolia Zeylanica Colombo* **12** 1923 pp. 223–251. [Col.]

- 47.—Andrews, A. W. The Coleoptera of the Shiras Expedition to Whitefish Point, Chippewa County, Michigan. Papers Mich. Acad. Sci. Arts & Letters Ann Arbor **1921** 1923 pp. 293–390.
- 48.—Annandale, N. The habits of the Termites of Barkuda. Records Ind. Mus. Calcutta **25** 1923 pp. 233–251 2 pls. 2 figs. [Isopt.]
- 49.—Antoine, M. Carabiques de la région des Beni M'Guild (Moyen Atlas). Bull. Soc. Sci. nat. Maroc Rabat **3** 1923 pp. 102–114. [Col.]
- 50.—Antoine, M. Additions à la liste des Carabiques de la Chaouïa et description d'une espèce nouvelle. Bull. Soc. Sci. nat. Maroc Rabat **3** 1923 pp. 115–116.
- 51.—Arendsen Hein, S. A. Larvenarten von der Gattung *Tenebrio* und ihre Kultur (Col.). (Systematisch-biologisch-genetische Notizen.) Ent. Mitt. Berlin **12** 1923 pp. 121–159 13 figs.
- 52.—[Arkhangelskaya, A. D.] Архангельская, А. Д. К фауне червейов или щитовок (Coccoidae) Туркестана. [The Coccid fauna of Turkestan.] Труд. Туркестанск. Научн. О-ва. [Trans. Turkestan Sci. Soc.] **1** 1923 pp. 259–266. [Hom.]
- 53.—Armbruster, L. Vom Wärmehaushalt im Bienenvolk. Verh. D. zool. Ges. Berlin **28** 1923 pp. 90–91. [Hym.]
- 54.—Arndt, W. Reste der Eiszeitfauna in Gewässern der Mark Brandenburg. Zugleich eine Bemerkung zur Terminologie des Glazialreliktbegriffs. SitzBer. Ges. natt. Freunde Berlin **1921** 1922 pp. 159–181.
- 55.—Arndt, W. Bemerkungen über die Rolle der Insekten im Arzneischatz der alten Kulturvölker. D. ent. Zs. Berlin 1923 pp. 553–570.
- 56.—Arnhart, L. Zur Entwicklungsgeschichte der *Braula coeca* Nitzsch. Zool. Anz. Leipzig **56** 1923 pp. 193–197 fig. [Dipt.]
- 57.—Arnold, G. The Sphegidae of South Africa. Ann. Transvaal Mus. Pretoria **9** 1923 pp. 143–253; **10** 1923 pp. 1–58 figs. [Hym.]
- 58.—Arrow, G. J. Certain Coleoptera of Barkuda. Rec. Ind. Mus. Calcutta **25** 1923 pp. 259–263.
- 59.—Arrow, G. J. New Erotylidae. Treubia Buitenzorg **3** 1923 pp. 272–274. [Col.]
- Ashcraft, J. B. see Woodworth & Ashcraft.
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- 61.—Auel, H. Die Generationen von *Polygonia c-album* (Lep.). Zs. wiss. Insektenbiol. Berlin **18** 1923 pp. 301–302.
- 62.—Auerbach, F. Etwas über die Spanner. Internat. ent. Zs. Guben **17** 1923 pp. 19–22. [Lep.]
- 63.—Aurivillius, C. Cerambycidae : Laminae II. Col. Cat. Junk & Schenckling pt. 74 pp. 323–704 1923.
- Aurivillius, C. see Schultze, A. & Aurivillius.
- 64.—Austen, E. E. A Revision of the family Pantophthalmidae (Diptera) with descriptions of new species and a new genus. Proc. Zool. Soc. London pt. 3 1923 pp. 551–598 11 figs.
- 65.—Auzat, V. Description d'un nouveau *Gnathoncus* de Sardaigne. (Coleopt. Hist.). Boll. Soc. ent. ital. Genoa **55** 1923 pp. 145–147.
- 66.—de Azevedo Marques, A. Parasitas da videira. Chacaras e Quintaes S. Paulo **28** 1923 pp. 529–530 1 fig. [Homop.]
- 67.—Babault, G. Description d'une nouvelle espèce de Cicindèle du Tonkin (Coleoptera). Bull. Soc. ent. France Paris **1923** pp. 7–9 1 fig.
- 68.—Baeckmann, J. Zur Kenntnis der Gattung *Hesperophanes* Muls. Reitt. (Coleoptera, Cerambycidae). Rev. russe Ent. Petrograd **18** 1923 pp. 65–68 1 fig.
- 69.—Bagnall, R. S. The Siphonaptera (Fleas) of Northumberland & Durham. Trans. Nat. Hist. Soc. Newcastle **5** 1921 pp. 181–198.
- 70.—Bagnall, R. S. Fossil Thysanoptera. I. Terebrantia, pt. 1. Ent. Mo. Mag. London **59** 1923 pp. 35–38.

71.—**Bagnall, R. S.** A contribution towards a knowledge of the British Thysanoptera with descriptions of new species. Ent. Mo. Mag. London **59** 1923 pp. 56–60.

72.—**Bagnall, R. S.** Brief descriptions of new Thysanoptera.—XIII. Ann. Mag. Nat. Hist. London (9) **12** 1923 pp. 624–631.

73.—**Baker, A. C.** Hemiptera of Connecticut: Aphididae. Subfamily Aphidinae—Tribe Callipterini. Conn. N. H. Surv. Hartford Bull. **34** 1923 pp. 271–290 11 figs.

74.—**Baker, A. C.** An undescribed orange pest from Honduras. J. Agric. Res. Washington D.C. **25** 1923 pp. 253–254 2 pls. [Homop.]

75.—**Baker, A. C. & Moles, M. L.** The Aleyrodidae of South America with description of four new Chilean species. Rev. chilena Hist. nat. Santiago **25** (1921) 1923 pp. 609–648 1 fig. 9 plates. [Homop.]

76.—**Baker, C. F.** The Jassoidea related to the Stenocotidae with special reference to Malayan species. Philipp. J. Sci. **23** 1923 pp. 345–405 5 pls. [Homop.]

77.—**Baker, C. F.** Comparison of Neotropical and Palaeotropical insect faunae. Philipp. J. Sci. Manila **23** 1923 pp. 531–532.

78.—**Balfour-Browne, F.** Contributions towards a list of the Insect Fauna of the South Ebudes. I. The aquatic Coleoptera of the South Ebudes. Scot. Nat. Edinburgh **1923** pp. 55–60, 87–93.

79.—**Banks, C. S.** A method of illustrating insect wings. Philipp. J. Sci. **22** 1923 pp. 407–410 1 pl.

80.—**Banks, N.** Insects, Arachnids and Chilopods of the Pribilof Islands, Alaska: Trichoptera. North Amer. Fauna Washington D.C. no. **46** 1923 p. 146.

81.—**Banks, N.** Insects, Arachnids and Chilopods of the Pribilof Islands, Alaska: Mecoptera. North Amer. Fauna Washington D.C. no. **46** 1923 p. 158 1 pl.

82.—**Banks, N.** Notes and descriptions of some Fossiliferous Hymenoptera. Canad. Ent. Orillia **55** 1923 pp. 21–22.

83.—**Bänniger, M.** Dritter Beitrag zur Kenntnis der Carabinae. Gattungen *Omophron* und *Elaphrus*. Arch. Natg. Berlin Abt. A **83** Heft 7 (1917) 1919 pp. 143–150. [Col.]

84.—**Bänniger, M.** Versuch einer Bestimmungstabelle der zentral- und ostasiatischen *Nebria*-Arten ohne gelbe Flügeldeckenzeichnung, nebst Bemerkungen über einige andere Formen. (6. Beitrag zur Kenntnis der Carabinae.) Koleopt. Rundsch. Vienna **10** 1923 pp. 129–142. [Col.]

85.—**Barber, B. A.** Notes on the life-history and habits of Mallophaga. Papers Mich. Acad. Sci. Arts & Letters Ann Arbor **1921** 1923 pp. 391–395.

86.—**Barber, G. W.** Notes on *Sinea diadema* (Fabr.): Hemiptera. Psyche Boston Mass. **30** 1923 pp. 74–76 2 figs.

87.—**Barber, G. W.** Notes on a New England Aradid. Psyche Boston Mass. **30** 1923 pp. 120–122 2 figs. [Hem.]

**Barber, G. W.** see Leonard & Barber.

88.—**Barber, H. G.** Hemiptera of Connecticut: Lygaeidae. Conn. N. H. Surv. Hartford Bull. **34** 1923 pp. 708–737 2 figs.

89.—**Barber, H. G.** A preliminary report on the Hemiptera-Heteroptera of Porto Rico collected by the American Museum of Natural History. Amer. Mus. Novit. New York no. **75** 1923 13 pp.

90.—**Barber, H. S.** A remarkable wingless glow-worm from Ecuador (Coleoptera, Lampyridae). Insector Inscitiae Menstruus Washington D.C. **11** 1923 pp. 191–194 1 pl.

91.—**Barber, H. S.** Two new *Conotrachelus* from tropical fruits. (Coleop. Curculionidae.) Proc. Ent. Soc. Washington D.C. **25** 1923 pp. 182–185 1 fig.

**Barber, H. S.** see Schwarz & Barber.

92.—**Barbey, A. & Ferrière, C.** Un cas intéressant du parasitologie dans l'écorce du pin sylvestre. Bul. Soc. Sci. nat. Lausanne **55** 1923 pp. 77–81 2 pls. [Hym.]

93.—**Barca, E.** Østfolds (Smaalenenes) lepidopterfauna II. Norsk Ent. Tidsskr. Christiania **1** 1923 pp. 216–234.

- 94.—Barnes, H. F. A hitherto undescribed *Gonomyia* Steph. (Diptera). Ent. Mo. Mag. London **59** 1923 pp. 255–256 1 fig.
- 95.—Barnes, M. E. Anopheline mosquitoes with special reference to the species found in Siam. J. Nat. Hist. Soc. Siam Bangkok **6** 1923 pp. 65–79 pl. [Dipt.]
- 96.—Barnes, W. & Benjamin, F. H. On the distribution of *Lampra barnesi* Benj. (Lepidoptera, Phalaenidae). Insector Inscitiae Menstruus Washington D.C. **11** 1923 pp. 135–136.
- 97.—Barnes, W. & Benjamin, F. H. Notes and new species (Geometridae, Lepid.). Lepidopterist Salem Mass. **4** 1923 pp. 9–12.
- 98.—Barnes, W. & Benjamin, F. H. The change of a preoccupied name. (Geom. Acidalinae). Lepidopterist Salem Mass. **4** 1923 p. 17. [Lep.]
- 99.—Barnes, W. & Benjamin, F. H. Synonymic notes with the description of a new genus (Lepid., Phalaenidae (= Noctuidae), Hadeninae). Bull. Brooklyn Ent. Soc. **18** 1923 pp. 123–126.
- 100.—Barnes, W. & Benjamin, F. H. A new subspecies of *Escarria clauda* Grote (Noctuidae). Proc. Cal. Acad. Sci. San Francisco **4** Ser. **12** 1923 pp. 423–424. [Lep.]
- 101.—Barnes, W. & Benjamin, F. H. Notes on two species of Lepidoptera described by Guénée (Noctuidae, Geometridae). Ent. News Philadelphia **34** 1923 p. 152.
- 102.—Barnes, W. & Benjamin, F. H. On *Megathymus stephensi* Skinner (Lepid., Hesperiidae). Ent. News Philadelphia Pa. **34** 1923 pp. 218–219.
- 103.—Barnes, W. & Benjamin, F. H. A new race of *Brenthis* from Colorado (Lepid.). Canad. Ent. Orillia **55** 1923 p. 146.
- 104.—Barnes, W. & Benjamin, F. H. Notes on aberrational names omitted from the Barnes and McDunnough Check List (Lepid.). Canad. Ent. Orillia **55** 1923 pp. 211–213.
- 105.—Barnes, W. & Benjamin, F. H. Notes on the *egans* group of *Oligia* (Phalaenidae, Lepid.). Canad. Ent. Orillia **55** 1923 pp. 264–265.
- 106.—Barnes, W. M. & McDunnough, J. A new *Catocala* form. Lepidopterist Salem **2** 1918 pp. 9–11.
- 107.—Barraud, P. J. Entomology in the Holy Land. Entomologist London **56** 1923 pp. 38–41, 58–62. [Lep.]
- 108.—Barraud, P. J. A revision of the Culicine mosquitoes of India. Parts I–VII. Ind. J. Med. Res. Calcutta **10** 1923 pp. 772–788, 934–942; **11** 1923 214–228, 475–505, 48 pls. [Dipt.]
- 109.—Barraud, P. J. Some new Culicine mosquitos found in India, and a note on *Finlaya assamensis* (Theo.). Bull. Ent. Res. London **13** 1923 pp. 405–408. [Dipt.]
- 110.—Barraud, P. J. Two new species of *Culex* (Diptera, Culicidae) from Assam. Ind. J. Med. Res. Calcutta **11** 1923 pp. 507–509.
- 111.—Barthe, E. Revision des genres *Cicindela* et *Carabus* de la région franco-rhénane. Misc. ent. Castanet-Tolosan **26** 1923 pp. 73–76; **27** 1923 pp. 1–5. [Col.]
- 112.—Barthe, E. Tableaux de détermination des Carabidae de la faune franco-rhénane. Misc. ent. Castanet-Tolosan **26** & **27** 1923 pp. 433–496 sep. pag. [Col.]
- 113.—Bathellier, J. Sur les jardins à champignons de l'*Eutermes matangensis* Haviland. C.R. Acad. Sci. Paris **176** 1923 pp. 129–131. Rectification à propos des nids d'*Eutermes* **177** 1923 pp. 430–432. [Isop.]
- 114.—Bathellier, J. Notes sur les rapports d'un nid d'*Eutermes matangensis* Haviland avec un nid de *Microtermes*. Ann. Sci. nat. (Zool.) Paris (10) **6** 1923 pp. 403–409.
- 115.—Baudrimont, A. Sur la très grande abondance du *Prosternon tessellatum* L. sur la Plage de Mimizan (Landes). Proc.-verb. Soc. linn. Bordeaux **72** 1920 pp. 172–180. [Col.]
- 116.—Baudrimont, A. Coléoptères et chasse à la marée. Proc.-verb. Soc. linn. Bordeaux **73** 1921 pp. 36–38.
- 117.—Baudrimont, A. Sur la "*Nebria complanata*" Lin. et ses variations pigmentaires sur la côte de la Gironde et des Landes. Proc.-verb. Soc. linn. Bordeaux **75** 1923 pp. 110–127 3 figs. [Col.]

118.—Baudyš, E. Ein Beitrag zur Verbreitung der Gallen in Böhmen. Verh. zool.-bot. Ges. Wien **66** 1916 pp. 49–136.

119.—Bauer, E. Eine neue *Glyphypteryx* (Microlep.) aus den Alpen. Ent. Mitt. Berlin **12** 1923 pp. 167–168 1 fig. [Lep.]

120.—Beaulieu, G. Monographie des Mélasides du Canada. Nat. canad. Quebec **49** 1923 pp. 193–194. [Col.]

121.—Beaulne, J. I. Les Coleoptères du Canada. Nat. canad. Quebec **49** 1923 pp. 190–192 211–216, 234–239, 261–264, 276–280; **50** 1923 pp. 68–71, 90–95, 117–120, 140–143.

122.—Becker, T. Nachtrag zu meinem Aufsatze. Beiträge zur Kenntnis einiger Gattungen der Bombyliiden. Ann. Mus. Nat. Hung. Budapest **15** 1917 p. 382. [Dipt.]

123.—Becker, T. Dipterologische Studien. Dolichopodidae. D. Aethiopische Region. Ent. Mitt. Berlin **12** 1923 pp. 1–50 1 pl. [Dipt.]

124.—Becker, T. Arktische Ural Dipteren. Wiener ent. Ztg. Vienna **40** 1923 pp. 111–115.

Bell, J. see Thomson, Bell & Pearson.

125.—Bell, T. R. The Common Butterflies of the Plains of India (including those met with in the hill stations of the Bombay Presidency). J. Bombay Nat. Hist. Soc. **29** 1923 pp. 429–455 3 figs. pp. 703–717. [Lep.] [Continuing.]

126.—Belling, H. *Parnassius apollo laurinus* subsp. nov. D. ent. Zs. Berlin **1923** pp. 271–272. [Lep.]

127.—Belling, H. Zwei neue Unterarten von *Parnassius apollo* L., *Parn. apollo ladinus* und *Parn. apollo venustus*. D. ent. Zs. Berlin **1923** pp. 287–290. [Lep.]

128.—Belling, H. Zur Zucht von *Arctia testudinaria* Fourcroy (Lep.). D. ent. Zs. Berlin **1923** pp. 546–547.

129.—Bénard, G. Travaux scientifiques de l'Armée d'Orient (1916–1918). Coléoptères Scarabaeidae : genre *Rhyssemus*. Bull. Mus. Hist. nat. Paris **1923** pp. 243–244 1 fig.

130.—Bénard, G. Un nouveau Carabique de l'Afrique orientale. Bull. Mus. Hist. nat. Paris **1923** pp. 567–569 1 fig. [Col.]

131.—Benderitter, E. Scarabaeides de la collection Gillet. Ann. Soc. ent. Belg. Brussels **63** 1923 pp. 5–8. [Col.]

132.—Benderitter (E.). Quelques Adorétides africains du Musée du Congo, Tervueren. Rev. zool. afr. Brussels **11** 1923 pp. 59–64 3 figs. [Col.]

133.—Benderitter, E. Quelques Rutélides exotiques nouveaux (Col.). Bull. Soc. ent. France Paris **1923** pp. 91–94 5 figs.

134.—Benderitter, E. Quelques Rutélides nouveaux (Col.) 10<sup>e</sup> note. Bull. Soc. ent. France Paris **1923** pp. 216–219.

135.—Benick, L. Notizen zur Gruppe Stenini in „Danmarks Rovbiller“ v. Joh. P. Johansen (pp. 479–529). Ent. Medd. Copenhagen **14** 1923 pp. 217–224. [Col.]

136.—Benick, L. *Stenus niveus* Fvl. und seine palaearktischen Verwandten. Ent. Blätter Berlin **19** 1923 pp. 88–90. [Col.]

137.—Benick, L. Beiträge zur Kenntnis der Tierwelt norddeutscher Quellgebiete. II. Coleoptera. Arch. Natg. Berlin **85** Abt. A Heft 2 (1919) 1920 pp. 299–316.

138.—Benick, L. Bemerkungen zu Dr. Eichelbaums Staphylinidenarbeiten, die Steninen betreffend, und zur Forceps-Präparation. (27. Beitrag zur Kenntnis der Megalopsidiinen und Steninen.) D. ent. Zs. Berlin **1923** pp. 249–252. [Col.]

Benjamin, F. H. see Barnes & Benjamin.

139.—Benoist, R. Hyménoptères Mellifères nouveaux pour la faune française. Bull. Soc. ent. France Paris **1922** 1923 pp. 322–324.

140.—Benson, R. B. Some *Agriades corydon* aberrations from the Bucks Chilterns (Tring District). Entomologist London **56** 1923 pp. 123–125. [Lep.]

141.—Bequaert, J. The South and Central African species of the genus *Synagris* Latreille (Hymenoptera). Ann. S. Afr. Mus. Cape Town **19** 1923 pp. 439–447.

142.—Bequaert, J. Vestigial pleometrosis in the North American *Polistes pallipes* Lepeletier. Bull. Brooklyn Ent. Soc. **18** 1923 pp. 73–80. [Hym.]

143.—Bequaert, J. & Davis, W. T. Tabanidae of Staten Island and Long Island, N.Y. Bull. Brooklyn Ent. Soc. Brooklyn **18** 1923 pp. 113–122. [Dipt.]

Bequaert, J. see Bradley & Bequaert.

144.—Bergevin, E. de. Description d'une nouvelle espèce de *Falcidius* (Homoptère Issidae) du Maroc occidental. Bull. Soc. Hist. nat. Afr. N. Algiers **14** 1923 pp. 80–83 4 figs.

145.—Bergevin, E. de. Description d'une nouvelle espèce d'*Hysteropterum monacanthé* (Hémiptère - Homoptère-Issidae) du Maroc occidental. Bull. Soc. Hist. nat. Afr. N. Algiers **14** 1923 pp. 83–86 1 pl.

146.—Bergevin, E. de. Description d'une nouvelle espèce d'*Hysteropterum (Hémiptère Issidae)* des Hauts-Plateaux algériens. Bull. Soc. Hist. nat. Afr. N. Algiers **14** 1923 pp. 108–112 6 figs.

147.—Bergevin, E. de. Description de deux espèces nouvelles d'Hémiptères Homoptères d'Egypte. Bull. Soc. Hist. nat. Afr. N. Algiers **14** 1923 pp. 173–178 5 figs.

148.—Bergevin, E. de. Liste des Hémiptères de la faune alpine du Grand Atlas Marocain. Bull. Soc. Sci. nat.. Maroc Rabat **3** 1923 pp. 153–155.

149.—Bergevin, E. de. Comment recueillir les Hémiptères. Arch. Inst. Pasteur Algérie Algiers **1** 1923 pp. 693–698.

150.—Bergrøth, E. Neue oder wenig bekannte Heteropteren. Arch. Natg. Berlin Abt. A **83** Heft 2 (1917) 1919 pp. 1–6. [Hem.]

151.—Bergrøth, E. On the systematic position of the genera *Dismegistus* Am. S. and *Parastrachia* Dist. Ann. Soc. ent. Belg. Brussels **63** 1923 pp. 70–72. [Hem.]

152.—Bergrøth, E. Two new Opisthoplatinae (Hem., Reduviidae). Notulae Ent. Helsingfors **3** 1923 pp. 18–19.

153.—Bergrøth, E. Un nouveau Macrocéphalide (Hem. Het.) de l'Indochine française. Notulae Ent. Helsingfors **3** 1923 pp. 33–34.

154.—Bergrøth, E. A new genus of Miridae (Hem. Het.) from Java. Treubia Buitenzorg **3** 1923 pp. 413–415.

Bergrøth, E. see Poppius & Bergrøth.

155.—Berland, L. Notes sur les Hyménoptères fouisseurs de France. II. Synonymie de quelques noms employés par J. H. Fabre. Bull. Soc. ent. France Paris **1923** pp. 171–175.

156.—Berland, L. Notes sur les Hyménoptères fouisseurs de France. III. Ann. Soc. ent. France Paris **92** 1923 pp. 287–288.

157.—Bernet-Kempers, K. J. W. Abbildungen von Flügelgeäder der Coleopteren. Ent. Mitt. Berlin **12** 1923 pp. 71–115 792 figs.

158.—Bernet-Kempers, K. J. W. Iets naar aanleiding van d'Orchymonts "Aperçu de la nervation alaire des Coleoptères." Tijdschr. Ent. The Hague **66** 1923 pp. 129–134 1 fig.

159.—Bernhauer, M. Neue Staphyliniden der indo-malaiischen Fauna, insbesondere der Sunda-Insel Borneo (9. Beitrag). Verh. zool.-bot. Ges. Wien **65** 1915 pp. 134–158. [Col.]

160.—Bernhauer, M. Neue Staphyliniden des tropischen Afrika (10. Beitrag). Verh. zool.-bot. Ges. Wien **65** 1915 pp. 287–321. [Col.]

161.—Bernhauer, M. Neue Staphyliniden des Indo-malaiischen Faunengebietes besonders der Philippinen (13. Beitrag). Verh. zool.-bot. Ges. Wien **66** 1916 pp. 418–431.

162.—Bernhauer, M. Vier neue *Belonuchus* aus Mexiko. Verh. zool.-bot. Ges. Wien **67** 1917 pp. 223–226. [Col.]

163.—Bernhauer, M. Neue *Quedius*-Arten der paläarktischen Fauna. Verh. zool.-bot. Ges. Wien **68** 1918 pp. 92–96. [Col.]

184.—Bernhauer, M. Eine blinde Gattung der Tribus Pygostenini aus dem südlichen Afrika. Verh. zool.-bot. Ges. Wien **69** 1919 pp. 353–354. [Col.]

185.—Bernhauer, M. Uebersicht über die Arten der Gattung *Physetops* Mannh. Koleopt. Rundschau Vienna **10** (1922) 1923 pp. 120–121. [Col.]

186.—Bernhauer, M. Neue Staphyliniden der palaearktischen Fauna. Koleopt. Rundschau Vienna **10** (1922) 1923 pp. 122–128. [Col.]

187.—Bernhauer, M. Neue Staphyliniden aus Südamerika. (29. Stück.) Wiener ent. Ztg. Vienna **40** 1923 pp. 49–60. [Col.]

188.—Bernhauer, M. Synonymische Bemerkungen bezüglich mehrfach beschriebener Staphyliniden Gattungen und Arten. Wiener ent. Ztg. Vienna **40** 1923 p. 63. [Col.]

189.—Bernhauer, M. Zur palaearktischen Staphylinidenfauna. Ent. Blätter Berlin **19** 1923 pp. 176–181. [Col.]

170.—Bernhauer, M. Coleopterologische Beiträge. I. Ueber *Atheta depressicollis* Fauv. und deren Verwandte. 2. Zur Kenntnis der Gattung *Oligota*. Ent. Tidskr. Stockholm **44** 1923 pp. 141–146.

171.—Bernhauer, M. Neue Staphyliniden des indo-malayischen Gebietes. 16. Beitrag. Arch. Natg. Berlin **84** Abt. A Heft 10 (1918) 1920 pp. 177–188. [Col.]

172.—Berthoumieu, V. Faune de l'Allier. Ordre des Lépidoptères. Rev. scient. Bourbonnais & Centre France Moulins **1923** pp. 35–41, 70–76, 88–95, 133–140.

173.—Bertin, L. L'adaptation des pièces buccales aux régimes alimentaires chez les Coléoptères Lamellicornes. Ann. Soc. linn. Lyon **69** 1923 pp. 145–159 8 figs.

174.—Bertoni, A. de W. Novedades Himenopterologicas. Rev. Soc. cient. Paraguay Asunción **1** 1921 pp. 11–12.

175.—Bertoni, A. de W. Sobre Vespoideos poco conocidos. Rev. Soc. cient. Paraguay Asunción **1** 1921 p. 53. [Hym.]

176.—Bethune-Baker, G. T. Description of the pupal shell of *Lachnochneuma bibulus* Fab. Trans. Ent. Soc. London **1923** pp. 106–109 1 pl. [Lep.]

177.—Bethune-Baker, G. T. Description of pupa of *Pararge hiera*. Ent. Rec. London **35** 1923 pp. 35–36. [Lep.]

178.—Bettinger, L. Une nouvelle variété de *Royerella* du Vercors (Col. Silphidae). Bull. Soc. ent. France Paris **1923** pp. 111–112.

179.—Beyer, A. H. A brief resumé of investigations made in 1913 on *Trogodera inclusa* Lec. (a Dermestid). Kansas Univ. Sci. Bull. Lawrence **14** 1922 pp. 373–387 2 pls. [Col.]

180.—Beyer, G. E. A new species of *Anopheles* in Louisiana, *Anopheles atropos*, D. & K. Amer. J. Trop. Med. Baltimore Md. **3** 1923 pp. 351–363 2 figs. [Dipt.]

181.—Bezrukov, L. Les oothèques des Acridiens. Извест. Сибирского Энт. Бюро. [Bull. Siberian Ent. Bur.] Petrograd no. **2** 1923 pp. 25–37 [Orth.] [In Russian.]

182.—Bezzi, M. Diptera, Bombyliidae and Myiodaria (Coenosiainae, Muscinae, Calliphorinae, Sarcophaginae, Dexiinae, Tachininae), from the Seychelles and neighbouring Islands. Parasitology Cambridge **15** 1923 pp. 75–102 9 figs.

183.—Bezzi, M. Un Oncodide italiano appartenente ad un genere nuovo per la fauna palaeartica (Dipt.). Bol. Soc. ent. ital. Genoa **55** 1923 pp. 99–105.

184.—Bezzi, M. Les mâles de *Musca albina* Wied. et de *Musca lucidula* Loew (Dipt.). Bull. Soc. R. ent. Egypte Cairo **1922** 1923 pp. 108–118.

185.—Bezzi, M. Eine neue, auf javanischen Chrysomeliden schmarotzende Tachinide (Dipt.). Treubia Buitenzorg **3** 1923 pp. 411–412.

186.—Bezzi, M. The Genus *Urophora* Robineau-Desvoidy in America (Diptera, Trypaeidae). Trans. Amer. Ent. Soc. Philadelphia **49** 1923 pp. 1–6 1 pl.

187.—Bezzi, M. Note on the Australian genus *Tapeigaster* Macq. (Diptera) with descriptions of new species. Austr. Zool. Sydney **3** 1923 pp. 72–78.

- 188.—**Bezzi**, M. A new genus of Dolichopodidae (Diptera) from Australia. *Austr. Zool. Sydney* 3 1923 pp. 179–182.
- 189.—**Bezzi**, M. On the Australian Lonchaeidae. *Austr. Zool. Sydney* 3 1923 pp. 183–185. [Dipt.]
- 190.—**Bezzi**, M. Trypanéides d'Afrique (Dipt.) de la collection du Muséum National de Paris. *Bull. Mus. Hist. nat. Paris* 1923 pp. 523–530, 577–581.
- 191.—**Bezzi**, M. Voyage de Ch. Alluaud et R. Jeannel en Afrique Orientale (1911–1912). vi. Bombyliidae et Syrphidae. *Paris* 1923 pp. 315–351 1 photo. [Dipt.]
- 192.—**Bezzi**, M. Fissicorn Tachinidae with description of new forms from Australia and South America. *Proc. Linn. Soc. N. S. W. Sydney* 48 1923 pp. 647–659 8 figs. [Dipt.]
- 193.—**Biawki**, W. L. & **Kiritchenko**, A. N. Практическая Энтомология. Руководство к практическим занятиям по энтомологии (курс высших учебных заведений). [Practical Entomology. Handbook of practical Studies in Entomology (Course for advanced educational Institutions).] Государственное Издательство [Government Publication] Petrograd 4 1923 lxvii + 320 pp. 48 figs. [Hemipt.-Heteropt.]
- 194.—**Biener**, A. Die Kriegsgefangenschaft vom Standpunkte des Entomologen. *Ent. Zs. Frankfort o. M.* 37 1923 pp. 17–18, 23, 36–37.
- 195.—**Biežanko**, C. M. Les Lépidoptères des environs de Kielce. I. Macrolépidoptères. *Soc. Amis Sci. Poznan Trav. Com. Sci. mat. nat.* 2 1923 ser. B pp. 145–212.
- 196.—**Biežanko**, C. M. Les Lépidoptères de Ojców, département Kielce. Matériaux à l'étude de la faune de la Pologne. [In Polish.] *Kosmos Bull. Soc. polonaise Nat. à Leopol* 1923 reprint 23 pp.
- 197.—**Bird**, H. Life-histories in the genus *Schinia* and allies (Lepid., Noctuidae) No. 1. *Ent. News Philadelphia Pa.* 34 1923 pp. 193–199.
- 198.—**Bird**, H. New life-histories, species and varieties in *Papaipema* (Lepidoptera) No. 22. *Canad. Ent. Orillia* 55 1923 pp. 106–109.
- 199.—**Bischoff**, H. Bernsteinhymenopteren. *Schr. physik. Ges. Königsberg* 56 (1915) 1916 pp. 139–144 4 figs.
- 200.—**Bischoff**, H. Hymenoptera. *Biol. Tiere Deutschlands Berlin* 1923 Teil 42 154 pp. 33 figs.
- 201.—**Bischoff**, H. Beitrag zur Kenntnis der Schmarotzerbienengattung *Phiarus* Gerst. *D. ent. Zs. Berlin* 1923 pp. 291–295. [Hym.]
- 202.—**Bischoff**, H. Zur Kenntnis afrikanischer Schmarotzerbienen. *D. ent. Zs. Berlin* 1923 pp. 585–603 [Hym.]
- 203.—**Bishop**, G. H. Cell metabolism in the insect fat-body. II. A functional interpretation of the changes in structure in the fat-body cells of the honey-bee. *J. Morph. Philadelphia* 37 1923 pp. 533–553.
- 204.—**Blackbourn**, B. Some observations on Mantids. *Vict. Nat. Melbourne* 38 1921 pp. 30–33. [Orth.]
- 205.—**Blackman**, M. W. New species of Ipidae from Maine. *N. Y. State Coll. Forestry Syracuse Tech. Pubn.* 16 1922 pp. 117–136 4 pl. [Col.]
- 206.—**Blackman**, M. W. Two new bark-beetles from Colorado. *N. Y. State Coll. Forestry Syracuse Tech. Pubn.* 16 1922 pp. 137–139 1 pl. [Col.]
- 207.—**Blackman**, M. W. Description of *Hylocurus parkinsoniae* n. sp. with revisional notes on *Hylocurus* Eichh. and *Micrais* Lec. *N. Y. State Coll. Forestry Syracuse Tech. Pubn.* 16 1922 pp. 142–148 1 pl. [Col.]
- 208.—**Blackmore**, E. H. Two new races of the genus *Plebeius* Linn. from British Columbia. *Canad. Ent. Orillia* 55 1923 pp. 98–100. [Lep.]
- 209.—**Blackmore**, E. H. Some new Noctuids from British Columbia (Lepid.). *Canad. Ent. Orillia* 55 1923 pp. 214–217.
- 210.—**Blair**, K. G. Insects in Winter. *Proc. S. Lond. Ent. N. H. Soc.* 1920–21 1921 pp. 26–42.
- 211.—**Blair**, K. G. New Species of Heteromerous Coleoptera from Mesopotamia. *Ent. Mo. Mag. London* 59 1923 pp. 118–126.

**212.**—Blair, K. G. Coleoptera of the second Mt. Everest Expedition, 1922.—Part II. Heteromera. Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 278–285.

**213.**—Blaisdell, F. E., Sr. Studies in the Melyridae (Coleoptera). No. 2. Trans. Amer. Ent. Soc. Philadelphia **49** 1923 pp. 315–337.

**214.**—Blaisdell, F. E., Sr. Expedition of the California Academy of Sciences to the Gulf of California in 1921. The Tenebrionidae. Proc. Cal. Acad. Sci. San Francisco 4th Ser. **12** 1923 pp. 201–288. [Col.]

**215.**—Blaisdell, F. E. Expedition of the California Academy of Sciences to the Gulf of California in 1921. The Melyridae (Lesser flower beetles). Proc. Cal. Acad. Sci. San Francisco 4th Ser. **12** 1923 pp. 409–421. [Col.]

**216.**—Blaisdell, F. E. Two new species of *Psephenus*, Hald., with a note on *Narpus angustus*, Casey (Coleop.). Ent. News Philadelphia **34** 1923 pp. 234–238.

**217.**—Blanchard, E. E. Apuntes sobre dos dipteros argentinos. Physis Buenos Aires **6** 1923 pp. 319–323 3 figs.

**218.**—Blanchard, E. E. Aphid Notes. Part IV. Physis Buenos Aires **7** 1923 pp. 24–45 10 figs. [Hom.]

**219.**—Blanchard, E. E. A new aphidian tribe from Argentina. Physis Buenos Aires **7** 1923 pp. 120–125 2 figs. [Hom.]

**220.**—Blanchard, F. N. The tiger-beetles (Cicindelidae) of Cheboygan and Emmet Counties, Michigan. Pprs. Mich. Acad. Sci. Arts & Letters Ann Arbor **1921** 1923 pp. 396–417 1 fig. [Col.]

**221.**—Blatchley, W. S. Notes on the Coleoptera of southern Florida with descriptions of new species. Canad. Ent. Orillia **55** 1923 pp. 13–20, 30–36.

**222.**—Blattny, C. Notes sur un groupe d'espèces du genre *Trimium* Aubé (Col. Pselaphidae). Bul. Sect. ent. Mus. Nat. Prague **1** 1923 pp. 67–69 1 fig.

Blattny, C. see Blattny, W. & C.

**223.**—Blattny, W. & C. Neue Pselaphiden aus Italien. Verh. zool.-bot. Ges. Wien **64** 1914 pp. (118)–(124) 5 figs. [Col.]

**224.**—Blattny, W. & C. Die von Paganetti-Hummel im Jahre 1914 auf einer Forschungreise in Kreta gesammelten Pselaphiden und Scydmaeniden. N. Beitr. system. Insektenk. Berlin **1** 1916 pp. 1–6. [Col.]

**225.**—Blunck, H. Zur Kenntnis des "Breitbands" *Dytiscus latissimus* und seiner Junglarve. Zool. Anz. Leipzig **57** 1923 pp. 157–168. [Col.]

**226.**—Blunck, H. Krankheiten, Feinde und Schmarotzer des Gelbrands. Zool. Anz. Leipzig **57** 1923 pp. 296–328 figs. [Col.]

**227.**—Blunck, H. Die Entwicklung des *Dytiscus marginalis* L. vom Ei bis zur Imago. 2. Teil. Die Metamorphose (B. Das Larven- und das Puppenleben). Zs. wiss. Zool. Leipzig **121** 1923 pp. 171–391 pls. figs. [Col.]

**228.**—Blüthgen, P. Beiträge zur Synonymie der Bienengattung *Halictus* Latr. III. D. ent. Zs. Berlin **1923** pp. 239–242. [Hym.]

**229.**—Blüthgen, P. Beiträge zur Systematik der Bienengattung *Sphecodes* Latr. D. ent. Zs. Berlin **1923** pp. 441–513. [Hym.]

**230.**—Blüthgen, P. Beiträge zur Kenntnis der Bienengattung *Halictus* Latr. Arch. Natg. Berlin Abt. A **89** 1923 Heft 5 pp. 232–332 38 figs. [Hym.]

**231.**—Blüthgen, P. Zur Biologie der Bienengattung *Sphecodes* Latr. (Hym.). Zs. wiss. Insektenbiol. Berlin **18** 1923 pp. 19–23. [Hym.]

**232.**—Blüthgen, P. Nota sobre *Halictus* de Canarias y España. Bol. Soc. esp. Hist. nat. Madrid **23** 1923 pp. 18–19. [Hym.]

**233.**—Blüthgen, P. Alcunos *Halictus* de Marruecos. Mem. Soc. esp. Hist. nat. Madrid **12** 1923 pp. 251–262. [Hym.]

**234.**—Bodenheimer, F. Beiträge zur Kenntnis der Kohlschnake (*Tipula oleracea* L.). Zur Anatomie und Ökologie der Imago. Zs. wiss. Zool. Leipzig **121** 1923 pp. 393–441 figs. [Dipt.]

**235.**—Bodine, J. H. Hibernation in Orthoptera. I. Physiological changes during hibernation in certain Orthoptera. J. Exptl. Zool. Philadelphia Pa. **37** 1923 pp. 457–476 7 figs. 1 table.

236.—**Boettger**, C. R. *Carabus morbillosus* Fabr. und *Otala tigri* Gerv. eine Studie gegenseitiger Anpassung. Abh. Senckenberg natf. Ges. Frankfort o. M. **37** 1921 pp. 321–325 2 plates. [Col.]

237.—**Bois-Reymond**, P. du. Beitrag zur Kenntnis der Zucht von *Odontosia sieversii* Mén. Zs. wiss. Insektenbiol. Berlin **18** 1923 pp. 69–72. [Lep.]

238.—**Bokór**, E. Ueber eine blinde Staphyliniden-Art aus Ungarn. Ann. hist.-nat. Mus. Natl. Hung. Budapest **20** 1923 pp. 172–177 9 figs. [Col.]

239.—**Bokór**, E. Bemerkungen zu Dr. Jeannel's Arbeit über die „blinden“ Käfer des Bihargebirges. Rovart. L. Budapest **26** 1923 pp. 78–87. [Col.]

240.—**Bokór**, E. Die Apionen der Dr. E. Kaufmann'schen Sammlung. Rovart. L. Budapest **26** 1923 pp. 95–102. [Col.]

241.—**Bolívar y Pieltain**, C. Notas sobre Carabidos españoles. Bol. Soc. esp. Hist. nat. Madrid **22** (1922) 1923 pp. 452–455. [Col.]

242.—**Bolívar y Pieltain**, C. Descripción de la larva de un Trechini marino. Bol. Soc. esp. Hist. nat. Madrid **23** 1923 pp. 56–59. [Col.]

243.—**Bolívar y Pieltain**, C. Nuevas formas del grupo Cranaë. Bol. Soc. esp. Hist. nat. Madrid **23** 1923 pp. 145–150. [Orth.]

244.—**Bolívar y Pieltain**, C. Descripción de un nuevo género del grupo Cranaë. Bol. Soc. esp. Hist. nat. Madrid **23** 1923 pp. 201–204. [Orth.]

245.—**Bolívar y Pieltain**, C. Notas sobre silfidos cavernícolas de España. Bol. Soc. esp. Hist. nat. Madrid **23** 1923 pp. 423–428. [Col.]

246.—**Bolívar y Pieltain**, C. Estudios sobre Calcídidos de la Familia Eupelmímidos. Rev. Fitopatología Madrid **1** 1923 pp. 20–24, 62–69, 114–122 4 figs. 1 plate. [Hym.]

247.—**Bolton**, H. On a new Blattoid wing from the Harrow Hill Mine, Drybrook (Forest of Dean). Abs. Proc. Geol. Soc. London **1922–23** 1923 p. 93. [Orth.]

248.—**Bondar**, G. Notas biológicas sobre alguns buprestídeos brasileiros do género *Cotobogaster* Solier. Rev. Mus. São Paulo **13** 1923 pp. 1267–1275 8 figs. [Col.]

249.—**Bondar**, G. Aleyrodídeos do Brasil. Catálogo descriptivo dos Hemípteros-Homópteros da família dos Aleyrodídeos, insetos parasitas das plantas encontrados no Brasil. Bahia **1923** 183 pp. 84 figs.

250.—**Bondar**, G. Biología do género *Collabismus* (Fam. dos Curculionídeos). Arch. Esc. sup. Agric. & Med. vet. Nietheroy **7** 1923 pp. 23–24 1 pl. [Col.]

251.—**Bonnamour**, —. Note sur l'habitat et les moeurs d' *Emesodema domestica* Scopoli (Hémiptère). Ann. Soc. linn. Lyon **67** (1920) 1921 pp. 79–81.

**Bonnamour**, S. see **Gautier & Bonnamour**; also **Gautier, Bonnamour & Chifflet**.

252.—**Bonne**, C. A new *Sabethes* from Surinam (Diptera, Culicidae). Insecutor Inscitiae Menstruus Washington D.C. **11** 1923 pp. 122–123.

253.—**Bonne**, C. Variability of *Anopheles tarsimacula* Goeldi (Diptera, Culicidae). Insecutor Inscitiae Menstruus Washington D.C. **11** 1923 pp. 127–128.

254.—**Bonne**, C. Notes on some *Goeldia* species from Surinam (Diptera, Culicidae). Insecutor Inscitiae Menstruus Washington D.C. **11** 1923 pp. 128–129.

255.—**Bonne**, C. The male hypopygium of *Chagasia farjardi* Lutz and the systematic position of this species. Tijdschr. Ent. The Hague **66** 1923 pp. 112–114 1 fig. [Dipt.]

256.—**Bonne**, C. The male hypopygium of *Anopheles mediopunctatus* Theobald. Tijdschr. Ent. The Hague **66** 1923 pp. 115–117 1 fig. [Dipt.]

257.—**Bonne**, C. The eggs of *Anopheles mediopunctatus* Theobald. Tijdschr. Ent. The Hague **66** 1923 p. 118 1 fig. [Dipt.]

**Bonne**, C. see **Bonne-Wepster & Bonne**.

258.—Bonne-Wepster, J. & Bonne, C. A new *Megarhinus* from Surinam (Diptera, Culicidae). *Insecutor Inscitiae Menstruus Washington D.C.* 11 1923 pp. 7-9.

259.—Bonne-Wepster, J. & Bonne, C. A list of mosquitoes from Dutch Guiana (Diptera, Culicidae). *Insecutor Inscitiae Menstruus Washington D.C.* 11 1923 pp. 123-127.

260.—Bonnier, G. Studies on high and low non-disjunction in *Drosophila melanogaster*. *Hereditas Lund* 4 1923 pp. 81-110.

261.—Bonnier, G. Über de Realisierung verschiedener Geschlechtsverhältnisse bei *Drosophila melanogaster*. *Zs. indukt. Abstammgslehre Berlin* 30 1923 pp. 283-284. [Dipt.]

262.—Bonnier, G. On different sex-ratios in *Drosophila melanogaster*. *Zs. indukt. Abstammgslehre Berlin* 31 1923 pp. 153-169.

263.—Bordas, L. Anatomie de l'appareil digestif des Lucanides. *Trav. sci. Univ. Rennes* 11 1912 pp. 67-72. [Col.]

264.—Bordas, L. Nouvelles observations sur l'ampoule rectale des Dytiscides. *Trav. sci. Univ. Rennes* 14 1916 pp. 72-75. [Col.]

265.—Bordas, L. Structure anatomique du "gésier" de quelques Dytiscides. *Trav. sci. Univ. Rennes* 14 1916 pp. 76-81. [Col.]

266.—Borelli, A. Di alcuni Dermatteri raccolti in Malesia dal prof. C. F. Baker. *Boll. Mus. Zool. Anat. comp. Torino* 35 no. 736 1921 pp. 1-9 1 fig. [Orth.]

267.—Borelli, A. Dermatteri delle isole Filippine. Nota VI. *Boll. Mus. Zool. Anat. comp. Torino* 38 no. 13 1923 20 pp. [Orth.]

268.—Borelli, A. Dermaptères du Congo belge. *Rev. zool afr. Brussels* 11 1923 pp. 412-434. [Orth.]

269.—Borgmeier, T. *Dohrniphora brasiliensis*, n. sp. ♀ (Dipt. Phoridae). *Bol. Soc. ent. Brasil Rio de Janeiro* 1922 pp. 14-15.

270.—Borgmeier, T. Beitrag zur Biologie der Feuerameise und ihrer

(N-12519 j) Q.

Gäste (*Solenopsis geminata saevissima* Sm.). *Zs. Deutsch. Ver. Wiss. u. Kunst S. Paulo* 3 (1922) 1923 pp. 1-9 1 fig. [Hym.]

271.—Borgmeier, T. Notas sobre Phorideos brasileiros. *Vozes de Petropolis* 17 1923 pp. 580-582, 628-630, 741-742, 794-796, 848-850 & 957-958 1 fig. [Dipt.]

272.—Borgmeier, T. Contribuição para a biologia da formiga do fogo e dos seus inquilinos. *Vozes de Petropolis* 17 1923 pp. 658-663. [Hym.]

273.—Borgmeier, T. Novos Phorideos brasileiros. *Bol. Mus. Nac. Rio de Janeiro* 1 1923 pp. 51-59. [Dipt.]

274.—Borgmeier, T. Contribuição para o conhecimento dos Phorideos do Brasil (Phoridae, Diptera). *Arch. Mus. Nac. Rio de Janeiro* 24 1923 pp. 323-346 11 figs.

275.—Borgmeier, T. Uma nova especie termitophila de *Dohrniphora Dahl*. (Diptera—Phoridae) com uma lista dos Phorideos do Brasil até hoje conhecidos. *Rev. Mus. São Paulo* 13 1923 pp. 1215-1224 1 pl.

276.—Boring, A. M. The varieties of *Monecphora bicincta* from the point of view of a cytologist. *Psyche Boston* 30 1923 pp. 89-92. [Hom.]

277.—Born, P. Ein neuer *Carabus-Hybride* aus der Schweiz. *Schweizer ent. Anz. Zürich* 1 1922 pp. 37-38. [Col.]

278.—Born, P. Weiterer Beitrag zur Kenntnis der Caraben Ostasiens (Col.). *Ent. Mitt. Berlin* 12 1923 pp. 159-161. [Col.]

279.—Born, P. *Carabus monticola* Dej. *Soc. ent. Stuttgart* 38 1923 pp. 13-14. [Col.]

280.—Boucomont, A. Notes sur divers Coléoptères coprophages. *Bull. Mus. Hist. nat. Paris* 1923 pp. 81-83.

281.—Boucomont, A. Travaux scientifiques de l'Armée d'Orient (1916-1918). Coléoptères coprophages. *Bull. Mus. Hist. nat. Paris* 1923 pp. 382-386.

282.—Boucomont, A. Quatre Onthophagini nouveaux d'Indo-Chine (Coleoptera). *Bull. Soc. ent. France Paris* 1923 pp. 9-11.

- 283.—Boucomont (A.). Coprophaga africana. Rev. zool. afr. Brussels **11** 1923 pp. 40–58. [Col.]
- 284.—Boulangé, —. Les Sagittae et les Volsellae des Hyménoptères supérieurs ont-elles leurs homologues chez les Chalastogastres ? Ann. Soc. sci. Bruxelles **40** 1921 pp. 88–96 1 fig. [Hym.]
- 285.—Bounoure, L. Aliments, chitine et tube digestif chez les Coléoptères. Paris, Hermann 1919 294 pp. 46 figs. [Not seen.]
- 286.—Bourgoin, A. Deux Cétonides nouveaux de Madagascar (Col. Scarabaeidae). Bull. Soc. ent. France Paris 1923 pp. 139–141.
- 287.—Bourgoin, A. Quatre Cétonides nouveaux (Col. Scarabaeidae). Bull. Soc. ent. France Paris 1923 pp. 162–165.
- 288.—Bourgoin, A. Une variété nouvelle d'*Eudicella morgani* et une *Platysodes* nouveau (Col. Scarabaeidae). Bull. Soc. ent. France Paris 1923 pp. 219–221.
- 289.—Boursin, C. Observations sur *Zygaena gallica* Oberth. (Lep. Zygaenidae). Bull. Soc. ent. France Paris 1923 pp. 67–69 1 fig.
- 290.—Bouvier, E. L. *Orniscodes gregatus* Saturnien dont les Chenilles édifient en société des bourses complexes. C.R. Acad. Sci. Paris **177** 1923 pp. 1081–1085. [Lep.]
- 291.—Bouvier, E. L. Observations sur quelques Saturniens recueillis au Venezuela par M. Grisol. Bull. Mus. Hist. nat. Paris 1923 pp. 353–359 4 figs. [Lep.]
- 292.—Bouvier, E. L. Quelques Saturniens nouveaux de l'Amérique tropicale. Bull. Mus. Hist. nat. Paris 1923 pp. 422–427 3 figs. [Lep.]
- 293.—Böving, A. G. The larvae and pupae of the social beetles *Coccidiotrophus socialis* (Schwarz & Barber) and *Eunausibius wheeleri* (Schwarz & Barber) with remarks on the taxonomy of the family Cucujidae. Zoologica New York **3** 1921 pp. 197–221 4 pls. [Col.]
- 294.—Bowditch, F. C. Studies among the American Galerucidae (Col.). Entomologist London **56** 1923 pp. 62–64, 86–88, 109–110, 209–212, 233–235, 254–258.
- 295.—Box, H. E. The bionomics of the white coffee-leaf miner, *Leucoptera coffeella*, Guér., in Kenya Colony (Lepidoptera, Lyonetiidae). Bull. Ent. Res. London **14** 1923 pp. 133–145 9 figs.
- 296.—Bradley, J. C. & Bequaert, J. A new *Dasymutilla* from Arizona. Amer. Mus. Novit. New York **82** 1923 pp. 1–3. [Hym.]
- 297.—Bradley, J. C. & Bequaert, J. Studies in African Mutillidae. Rev. zool. afr. Brussels **11** 1923 pp. 211–258. [Hym.]
- 298.—Brain, C. K. A preliminary report on the intracellular symbionts of South African Coccidae. Ann. Univ. Stellenbosch Cape Town **1** 1923 48 pp. 12 pls. [Hom.]
- 299.—Branch, H. E. The Life History of *Chironomus cristatus* Fabr. with descriptions of the Species. J. New York Ent. Soc. **31** 1923 pp. 15–30 3 pls. [Dipt.]
- 300.—Brandza, M. Contribuționi la studiul Zooecidiilor din România. An. Acad. Române Bucarest **36** 1914 pp. 173–235.
- 301.—Braun, A. F. Expedition of the California Academy of Sciences to the Gulf of California in 1921. The Tineid moths. Proc. Cal. Acad. Sci. San Francisco 4th Ser. **12** 1923 pp. 117–122. [Lep.]
- 302.—Braun, A. F. Microlepidoptera: Notes and new Species. Trans. Amer. Ent. Soc. Philadelphia **49** 1923 pp. 115–127.
- 303.—Braun, A. F. The Chambers specimens of Tineina in the collection of the American Entomological Society. Trans. Amer. Ent. Soc. Philadelphia **49** 1923 pp. 347–358. [Lep.]
- 304.—Brecher, L. Die Puppenfärbung des Kohlweisslings, *Pieris brassicae*, vii–ix. Anz. Ak. Wiss. Wien **57** 1920 pp. 157–158; **59** 1922 pp. 15–16, 228–230. [Lep.]
- 305.—Brecher, L. Die Puppenfärbung der Vanessiden i–iii. Anz. Ak. Wiss. Wien **58** 1921 pp. 40–42; **59** 1922 pp. 16–18, 228–230. [Lep.]

306.—**Brecher, L.** Die Bedingungen für Fühlerfüsse bei *Dixippus (Carausius) morosus* Br. et Redt. (Homoeosis bei Arthropoden, VII. Mitteilung). Anz. Ak. Wiss. Wien **59** 1922 p. 209–210. [Orth.]

307.—**Brecher, E.** Die Farbanpassung der Schmetterlingspuppen durch das Raupenauge. Verh. zool.-bot. ges. Wien **72** (1922) 1923 pp. (35)–(40). [Lep.]

308.—**Brecher, L.** Lichtbeeinflusste Schmetterlingspuppen und deren Nachkommen. Zs. indukt. Abstammungslehre Berlin **30** 1923 pp. 291–293. [Lep.]

309.—**Brehm, V.** Eine neue *Tanytarsus*-Larve. Zool. Anz. Leipzig **56** 1923 pp. 61–62 fig. [Dipt.]

310.—**Breit, J.** Beitrag zur Kenntnis der *Dorcadion*-Arten des Balkans. Wiener ent. Ztg. Vienna **40** 1923 pp. 145–149. [Col.]

311.—**Breit, J.** Neue Carabiden-Formen aus Griechenland. Koleopt. Rundsch. Vienna **10** 1923 pp. 143–146. [Col.]

312.—**Breitenbecher, J. K.** A red-spotted sex-limited mutation in *Bruchus*. Amer. Nat. New York **57** 1923 pp. 59–65. [Col.]

313.—**Brelje, R. v. d.** Ein Fall von Zwitterbildung bei *Aedes meigenanus*. Arch. mikr. Anat. Berlin **100** 1923 pp. 317–343 figs. [Dipt.]

314.—**Brèthes, J.** Description d'un Hyménoptère du Chili. Rev. chil. Hist. nat. Santiago **19** 1915 p. 69.

315.—**Brèthes, J.** Description d'un nouveau sous-genre de *Scymnus*. Rev. chil. Hist. nat. Santiago **19** 1915 pp. 87–88 1 fig. [Col.]

316.—**Brèthes, J.** Deux coléoptères chiliens nouveaux. An. Zool. aplic. Santiago **6** 1919 pp. 26–29 2 figs.

317.—**Brèthes, J.** Description d'un nouveau Diptère chilien parasite de *Laora variabilis*. An. Zool. aplic. Santiago **7** 1920 pp. 12–13. 1 fig. [Dipt.]

318.—**Brèthes, J.** Description d'un Encyrtide nouveau du Chili. Rev. chil. Hist. nat. Santiago **24** 1920 pp. 137–139 1 fig. [Hym.]

(N-12519 j)q

319.—**Brèthes, J.** Hyménoptères nouveaux du Chili. Rev. chil. Hist. nat. Santiago **25** (1921) 1923 pp. 128–129.

320.—**Brèthes, J.** Description d'un nouveau genre et une nouvelle espèce d'Ipidae du Chili. Rev. chil. Hist. nat. Santiago **25** (1921) 1923 pp. 433–435 1 fig. [Col.]

321.—**Brèthes, J.** Catalogue synonymique des Coccinellides du Chili. Rev. chil. Hist. nat. Santiago **25** (1921) 1923 pp. 453–456 1 fig. [Col.]

322.—**Brèthes, J.** Sur trois Coléoptères chiliens. Rev. chil. Hist. nat. Santiago **25** (1921) 1923 pp. 457–461 2 figs.

323.—**Brèthes, J.** Description d'un nouveau Cioidae du Chili. Rev. chil. Hist. nat. Santiago **27** 1923 pp. 29–30. [Col.]

324.—**Brèthes, J.** i. Description de deux nouveaux Coléoptères du Chili. ii. Rehabilitation d'une espèce latréillienne. Rev. chil. Hist. nat. Santiago **27** 1923 pp. 39–43 1 fig. [Col.]

325.—**Brèthes, J.** Un nouveau *Spilochalcis* du Chili. Rev. chil. Hist. nat. Santiago **27** 1923 p. 81. [Hym.]

326.—**Brèthes, J.** Sur quelques Hyménoptères du Chili. Rev. chil. Hist. nat. Santiago **27** 1923 pp. 124–128 2 figs.

327.—**Brèthes, J.** A proposito de la mosca *Melieria fasciata* (Wied.) Brèthes. Rev. chil. Hist. nat. Santiago **27** 1923 pp. 182–184. [Dipt.]

328.—**Brèthes, J.** La polilla del repollo (*Plutella maculipennis*, Curt.). An. Soc. Rural Argentina Buenos Aires **57** 1923 pp. 162–166 3 figs. [Lep.]

329.—**Brèthes, J.** Primera contribución para el conocimiento de los Strepsiptera argentinos. Rev. Facultad Agron. La Plata **15** 1923 reprint 18 pp. 4 pls.

330.—**Brèthes, J.** Una nueva mari posa argentina (*Allorhodoezia hampsoni*). Rev. Facultad Agron. La Plata **15** 1923 reprint 8 pp. 3 figs. [Lep.]

331.—**Brèthes, J.** Un *Phlebotomus* nuevo para la República Argentina (*Phlebotomus cortelezzii*). La Semana Médica Buenos Aires **1923** no. 8 reprint 12 pp. [Dipt.]

332.—Brèthes, J. Un *Dorypteryx* nouveau de Buenos Aires (Copeognatha). Bull. Soc. ent. France Paris 1923 pp. 117–119 2 figs.

333.—Brèthes, J. Note sur un genre et une espèce de Coccinellides australiens passés inaperçus. Bull. Soc. ent. France Paris 1923 pp. 227–229. [Col.]

334.—Brèthes, J. Sur un Diptère mineur des feuilles de *Salvia splendens* et deux Hyménoptères, ses parasites. Rev. Zool. agric. & appl. Bordeaux 22 1923 pp. 153–158 2 figs.

335.—Brien, P. Note sur *Phloea paradora* Burm. (1835). Bull. Soc. ent. Belg. Brussels 5 1923 pp. 109–113. [Hem.]

336.—Brimley, C. S. Additional records of Lepidoptera from North Carolina. Ent. News Philadelphia 34 1923 pp. 113–118.

337.—Brimley, C. S. Additional Surphidae (Diptera) from North Carolina with descriptions of two supposed new species. Ent. News Philadelphia 34 1923 pp. 277–279.

338.—Brittain, W. H. The morphology and synonymy of *Psyllia mali* Schmidberger. Proc. Acadian Ent. Soc. Fredericton N.B. 8 (1922) 1923 pp. 23–42 6 pls. 1 fig. [Hom.]

339.—Brittain, W. H. Papers on the leaf hoppers (Cicadellidae) of Nova Scotia. I. External morphology. Proc. Acadian Ent. Soc. Fredericton N.B. 8 (1922) 1923 pp. 57–67 5 pls. [Hom.]

340.—Brittain, W. H. & Whitehead, W. E. Papers on the leaf hoppers of Nova Scotia, II. Proc. Acadian Ent. Soc. Fredericton N.B. 8 (1922) 1923 pp. 128–146 7 pls. [Hom.]

341.—Britten, H. Siphonaptera. Records in the Counties of Cumberland, Westmorland, Lancashire, & Cheshire. Lancs. Ches. Nat. 13 1920 pp. 100–105.

342.—Britton, W. E. Hemiptera of Connecticut: Aleyrodidae. Conn. N. H. Surv. Hartford Bull. 34 1923 pp. 335–345 1 pl. 1 fig.

343.—Britton, W. E. Hemiptera of Connecticut: Coccoidea. Conn. N. H. Surv. Hartford Bull. 34 1923 pp. 346–382 3 pls. 3 figs.

344.—Britton, W. E. & others. The Hemiptera or Sucking Insects of Connecticut. Guide to the Insects of Connecticut. Pt. 4. Conn. N. H. Surv. Hartford Bull. 34 1923 783 pp. 20 pls. 169 figs. [see Abbott, Baker, Barber, Davis, DeLong, Funkhouser, Knight, Maxson, Osborn, Parshley, Patch, Stearns, Torre-Bueno, Van Duzee, Wilson.]

345.—Brocher, F. Les trachées inversées des Insectes. Bul. Soc. zool. Genève 3 1923 pp. 21–22.

346.—Brocher, F. La corne prosternale des larves des Trichoptères. Ann. Biol. lacustre Brussels 12 1923 pp. 83–91 1 fig.

347.—Brocher, F. Biologie et physiologie des Dytiscidés. Ann. Soc. ent. France Paris 91 1923 pp. 329–335. [Col.]

348.—Brombacher, E. Beiträge zur elsässischen Lepidopterfauna unter hauptsächlicher Berücksichtigung der näheren Umgebung von Strassburg [cont.]. Intern. ent. Zs. Guben 16 1923 pp. 179–182, 204–206; 17 1923 pp. 23–24, 45–46, 59–60, 105–106, 118–120, 129–131.

349.—Bromley, S. W. Observations on the feeding habits of robber flies. Part I. *Proctacanthus rufus* Will. and *P. brevipennis* Wied. Psyche Boston Mass. 30 1923 pp. 41–45. [Dipt.]

350.—Brooks, C. J. Early stages of a Danaine butterfly. J. Malayan Br. R. Asiat. Soc. 1 1923 pp. 260–261. [Lep.]

351.—Brooks, F. E. Oak sapling borer, *Goes tesselatus*, Haldeman. J. Agric. Res. Washington D.C. 26 1923 pp. 313–317 3 pls. [Col.]

352.—Brown, E. R. Teratological variations in the wings of Lepidoptera. Lancs. Ches. Nat. 12 1919 pp. 70–72; 13 1920 p. 45.

353.—Brown, J. M. Additional notes on the Apterygota of Yorkshire and Derbyshire. Naturalist London 1923 pp. 261–264.

354.—Brown, J. M. Two new Collembola found in Britain. Ann. Mag. Nat. Hist. London (9) 12 1923 pp. 325–329 8 figs.

355.—Bruch, C. Estudios mirmecológicos. Rev. Mus. La Plata Buenos Aires **26** 1922 pp. 175–211; **27** 1923 pp. 172–220 figs. pls. [Hym.]

356.—Bruch, C. Observaciones biológicas acerca de *Salpingogaster nigriventris* Bigot (Díptero-sírfido). Physis Buenos Aires **7** 1923 pp. 1–6 2 figs. 1 pl.

357.—Bruch, C. Coleópteros fertilizadores de *Prosopanche burmeisteri* De Bary. Physis Buenos Aires **7** 1923 pp. 82–88 3 figs. 1 pl.

358.—Bruch, C. La forma femenina de *Castanochilus bruchianus* Ohs. Physis Buenos Aires **7** 1923 pp. 115–119 3 figs. [Col.]

359.—Brues, A. M. On the wing venation of insects. [Translated from the French of LAMEERE, Bull. Class. Sci. Acad. Roy. Belg. 1922 pp. 38–149.] Psyche Boston Mass. **30** 1923 pp. 123–132.

360.—Brues, C. T. A new *Blepyrus*. Zoologica New York **3** 1921 pp. 229–230. [Hym.]

361.—Brues, C. T. *Termitobracon*, a termitophilous Braconid from British Guiana. Zoologica New York **3** 1923 pp. 427–432 2 figs. [Hym.]

362.—Brues, C. T. Two myrmecophilous Phoridae from British Guiana. Zoologica New York **3** 1923 pp. 435–440 1 fig. [Dipt.]

363.—Brues, C. T. Choice of food and numerical abundance among Insects. J. Econ. Ent. Geneva N.Y. **16** 1923 pp. 46–51.

364.—Brues, C. T. Some new fossil parasitic Hymenoptera from Baltic amber. Proc. Amer. Acad. Arts Sci. Boston **58** 1923 pp. 327–346 1 fig.

365.—Brues, C. T. A new genus of myrmecophilous Phoridae, with notes on some related forms. Psyche Boston Mass. **30** 1923 pp. 18–22 1 fig. [Dipt.]

366.—Brues, C. T. A fossil genus of Dinapsidae from Baltic amber (Hymenoptera). Psyche Boston Mass. **30** 1923 pp. 31–35 1 fig.

367.—Brues, C. T. Two new species of Phoridae from Baltic amber. Psyche Boston Mass. **30** 1923 pp. 59–62. [Dipt.]

368.—Brues, C. T. Ancient Insects: fossils in amber and other deposits. Sci. Mthly. New York **17** 1923 pp. 289–304 13 figs.

369.—Brun, R. Die psychischen Fähigkeiten der Insekten. Mitt. Entomologia Zürich **5** 1920 pp. 293–321 1 pl.

370.—Bruner, S. C. & Acuña, J. Sobre la biología de *Bephrrata cubensis*, Ashm., el insecto perforador de las frutas anonaceas. Rev. Agric. Com. & Trabajo Havana **6** 1923 pp. 21–30 14 figs. [Hym.]

371.—Brunetti, E. Two new species of Tabanidae from Cuba. Bull. Ent. Res. London **13** 1923 pp. 401–402. [Dipt.]

372.—Brunetti, E. The Fauna of British India. Diptera **3** 1923 pp. 1–424 6 pls. 85 figs.

373.—Brunetti, E. Second revision of the Oriental Stratiomyidae. Rec. Ind. Mus. Calcutta **25** 1923 pp. 45–180. [Dipt.]

374.—Brunetti, E. A New Indian Drosophilid Fly. Rec. Ind. Mus. Calcutta **25** 1923 pp. 303–304. [Dipt.]

375.—Brünnich, K. Zur Atmung bei den Insekten. Zs. angew. Ent. Berlin **9** 1923 pp. 161–162.

376.—Brünnich, K. Neues zur Innenwärme des Bienenkörpers. Zs. angew. Entom. Berlin **9** 1923 pp. 162–164.

377.—Bryan, E. H. *Halobates* in Hawaii (Hemiptera). Proc. Hawaiian Ent. Soc. Honolulu **1922** 5 1923 pp. 283–284.

378.—Bryan, E. H. New Records, Identifications, and Synonymy of Diptera found in Hawaii. Proc. Hawaiian Ent. Soc. Honolulu **1922** 5 1923 pp. 290–292.

379.—Bryant, G. E. Notes on synonymy in the Phytophaga (Coleoptera). Ann. Mag. Nat. Hist. London (9) **12** 1923 pp. 130–147.

380.—Bryk, F. Bibliotheca sphagidologica. Arch. Natg. Berlin **85** Abt. A Heft 5 (1919) 1920 pp. 102–183 figs. [Dipt.]

- 381.—Bryk, F. Neue Parnassier Ent. Zs. Frankfort o. M. **36** 1923 p. 56 1 fig. [Lep.]
- 382.—Bryk, F. Zur genaueren Festhaltung der Flügeltracht von *Papilio maacki* Mén. Intern. ent. Zs. Guben **17** 1923 pp. 52–54 57–58. [Lep.]
- 383.—Bryk, F. Parnassiana. Eine neue spanische Apollorasse. Soc. ent. Stuttgart **38** 1923 pp. 29–30 2 figs. [Lep.]
- 384.—Bryk, F. Bibliographia Chr. Aurivilliana. Ent. Tidskr. Stockholm **44** 1923 pp. 1–55.
- 385.—Bryk, F. Neue Beiträge zur Variabilität schwedischer Lepidopteren. II. Neue skandinavische Formen. Ent. Tidskr. Stockholm **44** 1923 pp. 107–116 8 figs.
- 386.—Bubaček, O. Eine Sammeltour in den Ostpyrenäen. Verh. zool.-bot. Ges. Wien **65** 1915 pp. (101)–(111). [Lep.]
- 387.—Bubaček, O. Eine neue Pieridenlokalform. Verh. zool.-bot. Ges. Wien **70** 1920 pp. (85)–(86). [Lep.]
- 388.—Bubaček, O. Sammelausbeute aus Korsika. Verh. zool.-bot. Ges. Wien **72** (1922) 1923 pp. (28)–(34). [Lep.]
- 389.—Buchanan, L. L. Two European weevils established in North America (Coleoptera, Curculionidae). Ent. News Philadelphia **34** 1923 pp. 280–281.
- 390.—Buchner, P. Tier und Pflanze in intrazellularer Symbiose. Berlin, Gebrüder Borntraeger 1921 462 pp. 103 figs. 2 pl.
- 391.—Buckell, E. R. *Cyphoderris monstrosa* Uhler in British Columbia. (Orthoptera). Canad. Ent. Orillia **55** 1923 pp. 225–230.
- 392.—Buckhurst, A. S., Staniland, L. N., & Watson, E. B. British Hymenoptera. London, Arnold & Co. 1923 48 pp. 8 pls. 16 figs.
- 393.—Buddenbrock, W. v. Einige Bemerkungen über den Schwirrflug der Insekten mit besonderer Berücksichtigung der Halteren der Zweiflügler. Ver. nat. hist. Ver. Heidelberg N.S. **13** 1914–17 pp. 497–515 4 figs.
- 394.—Bugnion, E. Mantes et Empuses. Essais d'élevage. Appareil génital de la femelle. Confection de l'oothèque. Eclosion des jeunes larves. Mém. Soc. vaudoise Sci. nat. Lausanne no. 5 1923 pp. 177–243 37 figs. [Orth.]
- 395.—Bugnion, E. Les organes buccaux de la Scolie (*Scolia bifasciata* Rossi). Mitt. schweiz. ent. Ges. Bern **13** 1923 pp. 285–313 14 figs. 2 pls. [Hym.]
- 396.—Buresch, J. [Ueber die Biologie von *Doritis apollinus* und seiner Verbreitung auf den Balkanhalbinsel.] Bulgar. Ak. Wiss. Sophia **12** 1915 pp. 15–36 figs. [Lep.]
- 397.—Buresch, J. Beitrag zur Lepidopterenfauna von Trazien und Mazedonien. Bulgar. Ak. Wiss. Sophia **12** 1915 pp. 37–54.
- 398.—Buresch, J., & Iltschew, D. Zweiter Beitrag zur Erforschung der Lepidopterenfauna von Trazien und Mazedonien. Arb. Bulgar. natt. Ges. Sophia **8** 1915 pp. 151–197; Dritter Beitrag . . . t.c. **9** 1921 pp. 61–86.
- Burgarth see Martini & Burgarth.
- 399.—Burkill, H. J. Report of the Plant Gall Section, 1920. Trans. London N. H. Soc. **1920** 1921 pp. 29–32.
- 400.—Burr, M., Campbell, B. P. & Uvarov, B. P. A contribution to our knowledge of the Orthoptera of Macedonia. Trans. Ent. Soc. London **1923** pp. 110–169 1 pl. 1 fig.
- 401.—Burras, A. E. An entomological visit to the Morvan (Central France). Entomologist London **56** 1923 pp. 134–139.
- 402.—Burrows, C. R. N. Notes on the Psychides. Ent. Rec. London **35** 1923 pp. 41–43, 57–62, 79–84, 116–118, 129–134. [Lep.] [Continuing.]
- 403.—Butler, E. A. A Biology of the British Hemiptera-Heteroptera. London 1923 pp. viii + 682 7 plates.
- 404.—Butler, E. A. A new British Capsid. Ent. Mo. Mag. London **59** 1923 pp. 28–29. [Heteropt.]
- 405.—Butler, E. A. On some Capsidae closely allied to certain British species. Ent. Mo. Mag. London **59** 1923 pp. 131–135. [Heteropt.]

- 406.—Buxton, P. A. *Anopheles* larvae from Palestine and elsewhere. Bull. Ent. Res. London **14** 1923 pp. 75–82 9 figs. [Dipt.]
- 407.—Buysson, H. du. Examen du terrene des arbres creux et appâts naturels ou artificiels, source inépuisable d'observations entomologiques. Misc. ent. Castanet Tolosan **27** 1923 pp. 25–29.
- 408.—Cabeau, C. Aberrations de Lépidoptères. Rev. mens. Soc. ent. Namur **23** 1923 pp. 14, 24–25, 29, 49, 56–58.
- 409.—Caillais, A. Sur la composition de la propolis des abeilles. C.R. Acad. Sci. Paris **177** 1923 pp. 1145–1147. [Hym.]
- 410.—Cajal, S. R. & Sánchez, D. Sobre la estructura de los centros ópticos de los insectos. Rev. chil. Hist. nat. Santiago **25** (1921) 1923 pp. 1–18 2 plates.
- 411.—Calvert, P. P. Studies on Costa Rican Odonata. x. *Megaloprepus*, its distribution, variation, habits and food. Ent. News Philadelphia **34** 1923 pp. 129–135 168–174 1 fig.
- 412.—Calvert, P. P. The geographical distribution of insects and the age and area hypothesis of Dr. J. C. Willis. Amer. Nat. New York **57** 1923 pp. 218–229.
- 413.—Cameron, M. Descriptions of new species of Staphylinidae from the West Indies. Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 363–400. [Col.]
- Campbell, B. P. see Burr, Campbell & Uvarov.
- 414.—Campbell, J. W. Notes on the Blepharoceridae (Diptera) of New Zealand. Trans. N. Z. Inst. Wellington **54** 1923 pp. 260–264 29 figs.
- 415.—Campion, H. Notes on Dragonflies from the Old World Islands of San Thomé, Rodriguez, Cocos-Keeling and Loo Choo. Ann. Mag. Nat. Hist. (9) **11** 1923 pp. 22–27. [Odon.]
- 416.—Campion, H. A new form of *Indothemis limbata* from Ceylon (Odonata). Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 28–31 1 fig.
- 417.—Campion, H. On the use of the generic name *Brachycercus* in Plecoptera and Orthoptera. Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 515–518.
- 418.—Campion, H. Descriptions of three species of *Notogomphus* (Odonata) from East Africa. Ann. Mag. Nat. Hist. London (9) **12** 1923 pp. 659–669 4 figs.
- 419.—Campion, H. A list of Odonata collected in Tanganyika Territory by Mr. A. Loveridge. Ann. Mag. Nat. Hist. London (9) **12** 1923 pp. 669–674 1 fig.
- 420.—Campos R., F. Catalogo sistemático y sinonímico de los Odonatos del Ecuador. Guayaquil **1922** 75 pp. 3 plates. [Odonata.]
- 421.—Campos R., F. Los Cicindelidae del Ecuador. Rev. chil. Hist. nat. Santiago **25** (1921) 1923 pp. 448–452. [Col.]
- Cannon, H. G. see Gatenby & Cannon.
- 422.—Carothers, E. E. Notes on the taxonomy, development and life history of certain Acrididae (Orthoptera). Trans. Amer. Ent. Soc. Philadelphia **49** 1923 pp. 7–24 4 pls.
- 423.—Carpentier, F. Musculature et squelette chitineux chez les Orthoptères. Mém. Acad. Roy. Brussels (2) **7** 1923 fasc. 3 pp. 1–56 11 figs.
- 424.—Carter, H. J. A revision of the Australian species of the genus *Melobasis* (Fam. Buprestidae, Order Coleoptera) with notes on allied genera. Trans. Ent. Soc. London **1923** pp. 64–105 2 pls. 2 figs.
- 425.—Carter, H. J. Revision of the genera *Ethon*, *Cisseis* and their allies. (Buprestidae). Proc. Linn. Soc. N. S. W. Sydney **48** 1923 pp. 159–176 12 figs. [Col.]
- 426.—Carter, W. & Harrison, J. W. R. Further forms of *Aricia medon* from County Durham. Entomologist London **56** 1923 pp. 107–108.
- 427.—Cassino, E. & Reiff, W. New Lepidoptera from the Jacob Doll Collection. Lepidopterist Salem Mass. **1** 1917 pp. 68–69 1 pl.
- 428.—Cassino, S. E. & Swett, L. W. Some new Geometrids. Lepidopterist Salem Mass. **4** 1923 pp. 1–8, 13–16 & 18–24. [Lep.]

- Cassino, S. E. see Swett & Cassino.
- 429.—Castek, J. Neue *Saturnia*-Hybriden. Intern. ent. Zs. Guben **16** 1922 pp. 209–212. [Lep.]
- 430.—Caudell, A. N. *Phorticolea boliviæ*, a new myrmecophilous cockroach from South America. Psyche Boston Mass. **30** 1923 pp. 28–30. [Orth.]
- 431.—Caudell, A. N. A new species of Zoraptera from Bolivia. Proc. Ent. Soc. Washington **25** 1923 pp. 60–62.
- 432.—Caudell, A. N. *Steiroxys hendersoni*, a new Katydid from Utah. Proc. U. S. Nat. Mus. Washington D.C. **62** art. 22 1923 pp. 1–2 1 fig. [Orth.]
- 433.—Caudell, A. N. *Grylloblatta* in California. Canad. Ent. Orillia **55** 1923 pp. 148–150. [Orth.]
- 434.—Ceballos, G. Notas sobre Ichneumónidos exóticos. Bol. Soc. esp. Hist. nat. Madrid **23** 1923 pp. 45–49, 92–94 & 283–286, figs. [Hym.]
- 435.—Cedergren, G. R. Försök till en insektgeografisk indelning av svenska skalbaggar. Ent. Tidskr. Stockholm **44** 1923 pp. 147–157. [Col.]
- 436.—Chaffin, J. Two new species of mealy-bugs from Florida (Order: Hemiptera. Family: Coccidae). Qtrly. Bull. Florida State Pl. Bd. Gainesville **7** 1923 pp. 169–171 4 figs.
- 437.—Chahovitch, X. L'immunité chez les insectes. Ann. Soc. linn. Lyon **69** 1923 pp. 235–238. [Orth.]
- 438.—Chamberlin, J. C. A revision of the genus *Anisembia*, with description of a new species from the Gulf of California. Proc. Cal. Acad. Sci. San Francisco 4th Ser. **12** 1923 pp. 341–351 10 figs. [Embioptera.]
- 439.—Chamberlin, J. C. A systematic monograph of the Tachardiinae or lac insects (Coccidae). Bull. Ent. Res. London **14** 1923 pp. 147–212 11 pl. 8 figs [Homopt.]
- 440.—Champion, G. C. Some Indian Coleoptera (10–12). Ent. Mo. Mag. London **59** 1923 pp. 43–53, 77–80, 165–179, 219–224, 247–253, 269–277 12 figs.
- 441.—Champion, G. C. New Malachiid beetles and further notes on the distribution and synonymy of various other species from South and East Africa (Coleoptera). Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 33–46 8 figs.
- 442.—Champion, G. C. A revision of the Malayan and Indian species of the Melyrid subfamily Carphurinae represented in the Hope Collection at Oxford and in the British Museum in London (Coleoptera). Ann. Mag. Nat. Hist. London (9) **12** 1923 pp. 1–54 1 pl. 4 figs.
- 443.—Champion, G. C. A revision of the eastern species of Nosodendridae (Coleoptera). Ann. Mag. Nat. Hist. London (9) **12** 1923 pp. 578–591.
- 444.—Champion, G. C. & Wasemann, E. New or imperfectly known Corythoderini from British India (Coleoptera). Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 569–581 1 pl.
- 445.—Champlain, A. B. & Knull, J. N. New species of *Agrius* (Buprestidae, Col.). Ent. News Philadelphia Pa. **34** 1923 pp. 84–85 274 1 fig.
- 446.—Champlain, A. B. & Knull, J. N. A new variety of *Melanophila drummondii* Kby. (Buprestidae, Coleoptera). Canad. Ent. Orillia **55** 1923 p. 105.
- 447.—Chang, H. S. A preliminary list of the Acridiidae of China. China J. Sci. & Arts Shanghai **1** 1923 pp. 486–493 (cont.) [Orth.]
- 448.—Chapin, E. A. The Elacatidae of the Philippine Islands and adjacent regions. Phil. J. Sci. Manila **22** 1923 pp. 83–87 1 pl. [Col.]
- 449.—Chapman, R. N. Observations on the life-history of *Taphrocerus gracilis* (Say). (Beetle, family Buprestidae). Cornell Univ. Agric. Expt. Sta. Ithaca N.Y. Mem. **67** 1923 13 pp. 4 pls.
- 450.—Chapman, T. A. What is a species? Ent. Rec. London **35** 1923 pp. 62–64.
- 451.—Chatterjee, S. N. A note on some discrepancies in Fauna of British India, Butterflies. J. Bombay Nat. Hist. Soc. **29** 1923 pp. 844–845.
- 452.—Chawner, E. F. and Peacock, A. D. Observations on the life-histories and habits of *Allantus pallipes* Spin. and *Pristiphora pallipes* Lep. (Hym. Tenth.). Entomologist London **56** 1923 pp. 125–128, 179–185.

453.—Ch'en, J.-Y. The genetics of two mutations in the fruit-fly, *Drosophila melanogaster*. China J. Sci. & Arts Shanghai 1 1923 pp. 593–603.

Chifflet, J. see Gautier, Bonnamour, & Chifflet.

454.—China, W. E. A new species of Membracidae (Centrotinae) from Uganda. Ann. Mag. Nat. Hist. London (9) 11 1923 pp. 463–465 3 figs. [Hom.]

455.—China, W. E. A new genus of Tropiduchidae (Homoptera) from S. Africa. Entomologist London 56 1923 pp. 81–85 7 figs.

456.—China, W. E. A new species of *Lygus* infesting potatoes in Java (Rhynchota, Capsidae). Bull. Ent. Res. London 13 1923 p. 447.

458.—Chittenden, F. H. Notes on the distribution and habits of North American *Phyllotreta* (Coleop.). Proc. Ent. Soc. Washington 25 1923 pp. 131–139 1 pl.

459.—Chobaut, A. Les aberrations de coloration de l'*Omophron limbatus* F. (Col., Omophroninae). Misc. ent. Castanet-Tolosan 27 1923 pp. 32–33.

460.—Chobaut, A. Sur le *Stenolemus novaki* Horvath (Hem., Reduviidae). Bull. Soc. ent. France Paris 1923 p. 81.

461.—Chobaut, A. Description d'un *Oxycara* nouveau (Col., Tenebrionidae) du Sud-Oranais. Bull. Soc. ent. France Paris 1923 pp. 165–167.

462.—Chobaut, A. Variations du *Glaphyrus serratulae*, F. (Coléoptère, Scarabaeidae). Bull. Soc. Sci. nat. Maroc Rabat 3 1923 p. 20.

463.—Chobaut, A. Coléoptères nouveaux du Maroc. Bull. Soc. Sci. nat. Maroc Rabat 3 1923 pp. 75–77 1 fig.

464.—Chobaut, A. Descriptions de trois *Anthicus* nouveaux du Maroc (Coléoptères, Anthicidae). Bull. Soc. Sci. nat. Maroc Rabat 3 1923 pp. 128–130.

465.—Chopard, L. Essai sur la faune des Orthoptères de la Corse. Ann. Soc. ent. France Paris 92 1923 pp. 253–286 1 pl. 9 figs.

466.—Chopard, L. Note sur quelques formes du genre *Myrmecophila* (Orthoptera) et diagnose d'une sous-espèce nouvelle de France. Bull. Soc. ent. France Paris 1923 pp. 29–30.

467.—Chopard, L. Description d'un Gryllide cavernicole de la Jamaïque (Orth.). Bull. Soc. ent. France Paris 1923 pp. 84–86 3 figs.

468.—Chopard, L. Description d'un Gryllide cavernicole du Congo Belge. Rev. zool. afr. Brussels 11 1923 pp. 298–300 1 fig. [Orth.].

469.—Chopard, L. On some New Zealand cave Orthoptera. Trans. N.Z. Inst. Wellington 54 1923 pp. 230–239 26 figs.

470.—Christophers, S. R. An *Anopheles* of the *Myzorhynchus* group (*Anopheles amazonicus* sp. n.) from South America. Ann. Trop. Med. & Parasit. Liverpool 17 1923 pp. 71–78 1 pl. [Dipt.]

471.—Christophers, S. R. A new East African Anopheline (*A. kingi*) related to *A. natalensis*, Hill & Haydon, and *A. watsonii*, Leicester. Ind. J. Med. Res. Calcutta 10 1923 pp. 1008–1019 2 pls. [Dipt.]

472.—Claassen, P. W. The larva of a Chironomid (*Trissocladius equitans* n. sp.) which is parasitic upon a mayfly nymph (*Rithrogena* sp.). Kansas Univ. Sci. Bull. Lawrence 14 1922 pp. 395–399 3 pls. [Dipt.]

473.—Claassen, P. W. New species of North American Plecoptera. Canad. Ent. Orillia 55 1923 pp. 257–263, 281–292, 2 pls.

474.—Clark, B. P. Thirty-three new Sphingidae. Proc. New Engl. Zool. Cl. Cambridge Mass. 8 1923 pp. 47–77. [Lep.]

475.—Clark, J. A new myrmecophilous beetle. J. R. Soc. W. Australia Perth 9 1923 pp. 44–46 fig. [Col.]

476.—Clark, J. Australian Formicidae. J. R. Soc. W. Australia Perth 9 1923 pp. 72–89 10 figs. [Hym.]

477.—Clausen, C. P. The biology of *Schizaspis tenuicornis*, Ashm., a Eucharid parasite of *Camponotus*. Ann. Ent. Soc. Amer. Columbus Ohio 16 1923 pp. 195–217 2 pls. [Hym.]

478.—Clausen, R. E. Inheritance in *Drosophila hydei*. i. White and vermillion eye-colours. Amer. Nat. New York **57** 1923 pp. 52–58. [Dipt.]

Clemente, L. S. see Detlefsen, J. A.

479.—Clements, F. E. & Long, F. L. Experimental Pollination. An outline of the ecology of flowers and insects. Carnegie Inst. Washington Pubn. **336** 1923 vii + 274 pp. 17 pls.

480.—Clérat, L. F. Uma ab. de *Papilio agavus*, Dru. Bol. Soc. ent. Brasil Rio de Janeiro **1922** p. 18. [Lep.]

Cleu, H. see Oberthür, Cleu & Powell.

481.—Cockayne, E. A. Structural abnormalities in Lepidoptera. London Naturalist **1921** 1922 pp. 10–69 1 pl.

482.—Cockerell, T. D. A. A bee-collecting trip across the plains (Hym.: Apoidea, Sphecoidea). Ent. News Philadelphia **34** 1923 pp. 45–50.

483.—Cockerell, T. D. A. Supplementary Note on *Megaloprepus* (Odon. Agrionidae). Ent. News Philadelphia **34** 1923 pp. 136–137.

484.—Cockerell, T. D. A. Two fossil Hymenoptera from Florissant (Vespidae, Megacoilidae). Ent. News Philadelphia **34** 1923 pp. 270–271.

485.—Cockerell, T. D. A. A new genus of mayflies from the Miocene of Florissant, Colorado. Psyche Boston Mass. **30** 1923 pp. 170–172. [Ephem.]

486.—Cockerell, T. D. A. Some bees from Victoria, Mexico. Proc. U. S. Nat. Mus. Washington D.C. **63** art. 8 no. 2476 5 pp. [Hym.]

487.—Cockerell, T. D. A. Expedition of the California Academy of Sciences to the Gulf of California in 1921. The Bees (I). Proc. Cal. Acad. Sci. San Francisco 4th Ser. **12** 1923 pp. 73–103. [Hym.]

488.—Cockerell, T. D. A. Insects in amber from South America. Amer. J. Sci. New Haven Conn. (5) **5** 1923 pp. 331–333. [Dipt.]

489.—Cockerell, T. D. A. Fossil insects from the Eocene of Texas. Amer. J. Sci. New Haven Conn. (5) **5** 1923 pp. 397–399 figs.

490.—Cockerell, T. D. A. Two nocturnal Bees and a minute *Perdita*. Amer. Mus. Novit. New York **66** 1923 pp. 1–4 5 figs. [Hym.]

491.—Cockerell, T. D. A. Some Colorado bees. Canad. Ent. Orillia **55** 1923 pp. 205–206. [Hym.]

492.—Cockerell, T. D. A. Descriptions and records of bees.—xvii & xviii. Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 263–269; (9) **12** 1923 pp. 238–247. [Hym.]

493.—Cockerell, T. D. A. Some bees from British Guiana. Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 442–459. [Hym.]

494.—Cockerell, T. D. A. The Coleoptera of the Madeira Islands. Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 689–696.

495.—Cockerell, T. D. A. The earliest known Ponerine ant. Entomologist London **56** 1923 pp. 51–52 1 fig. [Hym.]

496.—Cockerell, T. D. A. The Lepidoptera of the Madeira Islands. Entomologist London **56** 1923 pp. 243–247.

Cockerell, T. D. A. see Schaus & Cockerell.

497.—Codina, A. Cicindeles de Catalunya. Treb. Inst. catalana Hist. nat. Barcelona **2** 1916 pp. 245–299 1 pl. 5 figs. [Col.]

498.—Codina, A. *L'Oedipoda coeruleans sulfurescens* a Catalunya (Vall d'Aran). Butll. Inst. catalana Hist. nat. Barcelona (2) **1** 1921 p. 25. [Orth.]

499.—Codina, A. Claricies per a la Zoogeografia dels *Carabus* (Col. Carabinae) de Catalunya. Descripció de dugues formes noves. Un cas teratològic notable. Butll. Inst. catalana Hist. nat. Barcelona (2) **1** 1921 pp. 134–145 1 pl.

500.—Codina, A. Recull de Dipters de Catalunya. V. Fam. Dolichopodidae. Butll. Inst. catalana Hist. nat. Barcelona (2) **3** 1923 pp. 81–82. [Dipt.]

501.—Codina, A. *Sphecodes* (Latr.) (Hym. Apidae) de Catalunya determinats per Dr. P. Blüthgen. Butll. Inst. catalana Hist. nat. Barcelona (2) **3** 1923 pp. 123–126.

502.—Cole, F. R. Corrections to the "Annotated List of the Diptera (Flies) of Oregon." Ent. News Philadelphia **34** 1923 pp. 205–209.

503.—Cole, F. R. Expedition of the California Academy of Sciences to the Gulf of California in 1921. The Bombyliidae (bee-flies). Proc. Cal. Acad. Sci. San Francisco 4th Ser. **12** 1923 pp. 289–314. [Dipt.]

504.—Cole, F. R. Diptera from the islands and adjacent shores of the Gulf of California. II. General Report. Proc. Cal. Acad. Sci. San Francisco 4th Ser. **12** 1923 pp. 457–481 16 figs.

505.—Cole, F. R. A revision of the North American two-winged flies of the family Therevidae. Proc. U. S. Nat. Mus. Washington D.C. **62** 1923 art. 4 no. 2450 140 pp. 13 pls. [Dipt.]

506.—Cole, F. R. Notes on the Dipterous family Cyrtidae. Psyche Boston Mass. **30** 1923 pp. 46–48 1 fig.

507.—Cole, F. R. Notes on the early stages of the Syrphid genus *Microdon* (Diptera). J. Ent. & Zool. Claremont Cal. **15** 1923 pp. 19–20 1 fig.

508.—Cole, F. R. Notes on California Bombyliidae with descriptions of new species. J. Ent. & Zool. Claremont Cal. **15** 1923 pp. 20–26 11 figs. [Dipt.]

509.—Collin, J. E. An intersex of *Mydaea duplicata*. Trans. Ent. Soc. London **1922** 1923 p. lxxx. [Dipt.]

510.—Comes, S. Nuove osservazioni sui movimenti di maneggio consequenti alla decapitazione di alcuni Artropodi. Boll. Acc. Gioenia Catania **49** 1921 pp. 111–116.

511.—Comstock, J. A. Butterflies of California. Bull. S. Cal. Acad. Sci. Los Angeles **22** 1923 pp. 15–16 75 2 pls.

512.—Comstock, J. A. Studies in Pacific Coast Lepidoptera. Bull. S. Cal. Acad. Sci. Los Angeles **22** 1923 p. 69 1 pl.

513.—Comstock, J. A. Notes on the *pola-minuta* group of *Melitaea*, with description of a new species. Lepidopterist Salem **2** 1918 pp. 55 70–73 1 pl. [Lep.]

514.—Cook, W. C. Studies in the physical ecology of the Noctuidae. Minnesota Agric. Expt. Sta. Univ. Farm St. Paul Minn. Tech. Bull. **12** 1923 38 pp. [Lep.]

515.—Coolidge, K. R. The life-history of *Hesperia ericetorum* Boisd. (Lepid., Hesperiidae). Ent. News Philadelphia **34** 1923 pp. 140–146.

516.—Coolidge, K. R. The life-history of *Pieris beckeri* Edwards (Lepid., Pieridae). Ent. News Philadelphia **34** 1923 pp. 225–231.

517.—Coolidge, K. R. The life-history of *Phaedrotes piassus* Boisd. (Lepid., Lycaenidae). Ent. News Philadelphia **34** 1923 pp. 295–300.

518.—Coolidge, K. R. The life-history of *Thanaos funeralis* Scud. & Burg. (Lepid., Hesperiidae). J. New York Ent. Soc. **31** 1923 pp. 175–181.

519.—Cornelsen, H. Neue Schmetterlinge aus meiner Sammlung. Intern. ent. Zs. Guben **16** 1923 pp. 212–213. [Lep.]

520.—Corti, A. Zuchtergebnisse aus der Gattung *Agrotis* O. *Agrotis wiskotti* Stdfs., *Agrotis culminicola* Stdgr. und *Agrotis helvetica* B. ab ovo. Mitt. Entomologia Zürich **1** 1915 pp. 1–11. [Lep.]

521.—Costa, D. Contributo alla fauna lepidotterologica del Carso. Forme nuove per l'altipiano raccolte durante l'estate 1922. Boll. Soc. ent. ital. Genoa **55** 1923 pp. 49–51.

522.—Costa Lima, A. da. Descripção de uma nova espécie do gênero *Rhatymoscelis* Thom. (Coleopt. Cerambycidae). Bol. Soc. ent. Brasil Rio de Janeiro **1922** pp. 21–23.

523.—Costa Lima, A. da. Catalogo sistemático dos Insectos que vivem nas plantas do Brasil e ensaio de bibliographia entomológica brasileira. Arch. Escola sup. Agric. Med. vet. Nictheroy **6** 1922 pp. 107–276.

524.—Costa Lima, A. da. Nota sobre as espécies do gênero *Eucalymnatus* (Fam. Coccidae, sub-fam. Coccinae). Arch. Esc. sup. Agric. & Med. vet. Nictheroy **7** 1923 pp. 35–44 2 pls [Hom.]

525.—Costantini, A. Lepidoptera pro fauna italica nova, additis specierum formarumque novarum descriptionibus. II. Zs. wiss. Insektenbiol. Beilage Neue Beiträge system. Insektenk. Berlin 2 1923 pp. 105–107. [Lep.]

526.—Cottam, R. Notes on the buff variety of the Peppered Moth, *Pachys (Amphidasys) betularia*. Lancs. Chas. Nat. 16 1923 pp. 20–28 pl. [Lep.]

527.—Cotte, J. & Reynier, A. La dioecie du figuier et *Blastiophaga psenes* (L.) C.R. Soc. Biol. Paris 88 1923 pp. 500–502. [Hym.]

528.—Craighead, F. C. North American Cerambycid larvae. A classification and the biology of North American Cerambycid larvae. Canada Dept. Agric. Ottawa Ent. Bull. 23 1923 238 pp. 44 pls. 8 figs. [Col.]

529.—Crampton, G. C. A comparison of the terminal abdominal structures of an adult alate female of the primitive termite *Mastotermes darwinensis* with those of the roach *Periplaneta americana*. Bull. Brooklyn Ent. Soc. 18 1923 pp. 85–93 2 figs.

530.—Crampton, G. C. A comparison of the labium in certain holometabolous insects from the standpoint of phylogeny. Proc. Ent. Soc. Washington D.C. 25 1923 pp. 171–180 1 pl.

531.—Crampton, G. C. A phylogenetic comparison of the maxillae throughout the Orders of insects. J. New York Ent. Soc. 31 1923 pp. 77–107 6 pls.

532.—Crampton, G. C. Preliminary note on the terminology applied to the parts of an insect's leg. Canad. Ent. Orillia 55 1923 pp. 126–132 1 pl.

533.—Crawley, W. C. Myrmecological notes. Ent. Rec. London 35 1923 pp. 29–32. [Hym.]

534.—Crawley, W. C. Myrmecological notes. New Australian Formicidae. Ent. Rec. London 35 1923 pp. 177–179. [Hym.]

535.—Cresson, E. T. A new species of an *Achias*-like fly from Nicaragua, apparently belonging to the little-known genus *Plagioccephalus* (Diptera; Ortidae). Ent. News Philadelphia 34 1923 pp. 257–260.

536.—Cresson, E. T. Records of some western Diptera with descriptions of two new species of the family Bombyliidae. Proc. Acad. Nat. Sci. Philadelphia 75 1923 pp. 365–367.

537.—Cresson, E. T. & Rehn, J. A. G. Entomological Literature. Ent. News Philadelphia 34 1923 pp. 29–32, 60–62, 91–93, 124–126, 156–159, 188–191, 219–223, 246–253, 283–288, 316–320.

538.—Cretschmar, M. Der Mechanismus der Geschlechtsvererbung. Intern. ent. Zs. Guben 17 1923 pp. 123–127 134–135.

539.—Criddle, N. The life habits of *Cephus cinctus* Nort. in Manitoba. Canad. Ent. Orillia 55 1923 pp. 1–4. [Hym.]

540.—Croisé, P. Der Schmetterlingsfang am frühen Morgen. Gesellsch. Luxemb. Naturfreunde Festschrift zur Feier des 25-jährigen Bestehens 1890–1915 1915 pp. 269–280. [Lep.]

541.—Cros, A. Le *Leptopalpus rostratus* Fabr. Ses moeurs, sa larve primaire. Bull. Soc. Hist. nat. Afr. N. Algiers 14 1923 pp. 327–337 1 pl.

542.—Crozier, W. J. On the locomotion of the larvae of the slug-moths (Cochlidioidae). J. Exptl. Zool. Philadelphia 38 1923 pp. 323–329. [Lep.]

543.—Csiki, E. Locustidarum species nova ex Hungaria. Rovart. L. Budapest 26 1922 pp. 38–39 6 figs. [Orth.]

544.—Csiki, E. Beiträge zur Käferfauna Ungarns. Rovart. L. Budapest 26 1922 pp. 39–45. [Col.]

545.—Csiki, E. Hymenoptera. (Explorations zoologicae ab E. Csiki in Albania peractae, X.) Magyar Tud. Akad. Balkan-kut. tud. ered. Budapest 1 1923 pp. 140–142.

546.—Cuénod, L. & Mercier, L. Les muscles du vol chez les mutants alaires des Drosophiles (*Drosophila melanogaster* Meig.). C.R. Acad. Sci. Paris 176 1923 pp. 1112–1113. [Dipt.]

547.—Curran, C. H. A new genus and species of Xyelidae (Tenthredinoidea, Hymenoptera) from Western Canada. Canad. Ent. Orillia 55 1923 pp. 20.

548.—Curran, C. H. Our North American *Leucozona*, a variety of *lucorum* (Syrphidae, Diptera). Canad. Ent. Orillia 55 1923 p. 38.

549.—Curran, C. H. The *Stenosyrphus sodalis* group (Syrphidae, Diptera). Canad. Ent. Orillia 55 1923 pp. 59–64.

550.—Curran, C. H. An apparently undescribed species of *Scellus* (Dolichopodidae, Diptera). Canad. Ent. Orillia 55 1923 pp. 73–74.

551.—Curran, C. H. Changes of names. Canad. Ent. Orillia 55 1923 pp. 74, 198. [Dipt.]

552.—Curran, C. H. Studies in Canadian Diptera. I. Revision of the Asilid genus *Cyrtopogon* and allied genera. Canad. Ent. Orillia 55 1923 pp. 92–95, 116–125, 132–142, 169–174, 185–190 1 pl.

553.—Curran, C. H. Notes on some Diptera. Canad. Ent. Orillia 55 1923 p. 150.

554.—Curran, C. H. Observations on the oviposition of *Senotainia trilineata*, v. der Wulp. Canad. Ent. Orillia 55 1923 p. 174. [Dipt.]

555.—Curran, C. H. Undescribed Canadian Dolichopodidae, with key to *Chrysotimus* (Diptera). Canad. Ent. Orillia 55 1923 pp. 190–192.

556.—Curran, C. H. Apparently undescribed Canadian Asilidae and Dolichopodidae (Diptera). Canad. Ent. Orillia 55 1923 pp. 207–211.

557.—Curran, C. H. A new Dolichopodid from Ontario (Diptera). Canad. Ent. Orillia 55 1923 pp. 236–237.

558.—Curran, C. H. New North American Diptera. Canad. Ent. Orillia 55 1923 pp. 245–246.

559.—Curran, C. H. Studies in Canadian Diptera. II.—The genera of the family Blepharoceridae. Canad. Ent. Orillia 55 1923 pp. 266–269.

560.—Curran, C. H. A new Syrphid from Ontario (Diptera). Canad. Ent. Orillia 55 1923 p. 269.

561.—Curran, C. H. New Cycloorrhaphous Diptera from Canada. Canad. Ent. Orillia 55 1923 pp. 271–279.

562.—Curran, C. H. Relation of the biological and taxonomic studies in Syrphidae. 53rd Ann. Rept. Ent. Soc. Ontario 1922 Toronto 1923 pp. 30–33. [Dipt.]

563.—Curran, C. H. Two new North American Diptera. Occ. Paprs. Soc. Nat. Hist. Boston 5 1923 pp. 59–61.

564.—Curran, C. H. Two undescribed Syrphid flies from New England. Occ. Paprs. Soc. Nat. Hist. Boston 5 1923 pp. 65–67. [Dipt.]

565.—Curran, C. H. Notes on the genus *Pipizella* Rondani, with descriptions of new species (Diptera, Syrphidae). Trans. Amer. Ent. Soc. Philadelphia 49 1923 pp. 339–345.

566.—Curran, C. H. Two varieties of *Eurosta solidaginis* Fitch (Trypetidae, Dipt.). Ent. News Philadelphia 34 1923 p. 302.

567.—Curran, C. H. Two examples of sexual dimorphism in the genus *Sericomyia* (Diptera, Syrphidae). Insector Inscitiae Menstruus Washington D.C. 11 1923 pp. 136–141.

568.—Curran, C. H. Records of some African *Microdon* (Syrphidae) with the description of one new species. Rev. zool. afr. Brussels 11 1923 pp. 145–147 1 fig. [Dipt.]

569.—Cushman, R. A. A new subfamily of Braconidae (Hym.) from termite nests. Proc. Ent. Soc. Washington D.C. 25 1923 pp. 54–55 1 pl.

570.—Czižek, K. Beiträge zu einer Dipterenfauna Mährens. Zs. Mähr. Landesmuseums Brünn 6 1906 pp. 182–234. [Dipt.]

571.—Czižek, K. Beiträge zur rezenten Fauna der mährischen Höhlen. I. Teil. Zs. Mähr. Landesmuseums Brünn 15 1916 pp. 13–58 13 figs. [Dipt.]

572.—Czižek, K. Die mährischen Formen der Dipterenfamilie Liriopidae (Ptychopteridae). Zs. Mähr. Landesmuseums Brünn 17 1919 pp. 1–16 10 figs. [Dipt.]

573.—Dabbert, H. Ein Hermaphrodit von *Dytiscus marginalis* L. Soc. ent. Stuttgart 38 1923 p. 11 fig. [Col.]

574.—Dakin, W. J. The problem of sex determination with special reference to the honey bee. Proc. Trans. Liverpool Biol. Soc. **37** 1923 pp. 1–7.

575.—Dallas, E. D. Sobre dos anomalias en coleópteros remitidos por el señor Tremoleras, de Montevideo. Physis Buenos Aires **6** 1923 pp. 356–357 2 figs.

576.—Dallman, A. A. Plant Galls [of Cheshire]. Lancs. Ches. Nat. **14** 1921 pp. 50–70 97–125.

577.—Dammer, —. Fleckenzwitter von *Lymantria dispar* L. Ent. Zs. Frankfort o. M. **36** 1923 pp. 55–56. [Lep.]

578.—Davidson, W. M. Biology of *Scytus nubes*, Casey (Coleoptera, Coccinellidae). Trans. Amer. Ent. Soc. Philadelphia **49** 1923 pp. 155–163 1 pl.

579.—Davis, W. T. Hemiptera of Connecticut: Cicadidae. Conn. N. H. Surv. Hartford Bull. **34** 1923 pp. 238–242 1 pl.

580.—Davis, W. T. A new Longicorn beetle from the Catskill Mountains. Bull. Brooklyn Ent. Soc. **18** 1923 pp. 97–98.

581.—Davis, W. T. Notes on North American Cicadas, with descriptions of new species. J. New York Ent. Soc. **31** 1923 pp. 1–15 2 pls. 3 figs. [Hom.]

582.—Davis, W. T. A new walking-stick insect from Eastern North America. J. New York Ent. Soc. **31** 1923 pp. 52–55 1 pl. [Orth.]

Davis, W. T., see Bequaert & Davis.

583.—Deecke, W. Die paläontologische Seite der Insektenmikry. Ber. natf. Ges. Freiburg **23** 1921 pp. 1–8.

584.—Degeener, P. Weitere Mitteilungen über Gesellschaftskokons bei Lepidopteren. Zs. wiss. Insektenbiol. Berlin **18** 1923 pp. 51–56 22 figs.

585.—Delahon, P. Nachträge zu "Schilskys Systematischem Verzeichnis der Käfer Deutschlands" von 1909 mit besonderer Berücksichtigung der Formen der Mark Brandenburg, sowie einige sonstige Bemerkungen über Käfer aus Deutschland. (Col.). D. ent. Zs. Berlin **1923** pp. 91–94.

586.—De Long, D. M. Hemiptera of Connecticut: Cicadellidae. Conn. N.H. Surv. Hartford Bull. **34** 1923 pp. 56–163 2 pls. 11 figs.

587.—De Long, D. M. The distribution of the leafhoppers of the Presque Isle, Pa., and their relation to plant formations. Ann. Ent. Soc. Amer. Columbus Ohio **16** 1923 pp. 363–371 2 pls. 1 fig. [Hom.]

De Long, D. M. see Sanders & De Long.

588.—Della Corte, M. Sulla resistenza delle uova del filugello ad elevate temperature durante l'incubazione. Boll. R. Staz. sperim. Gelsic. & Bachic. Ascoli Piceno **2** 1923 pp. 107–112. [Lep.]

589.—Demaison, L. *Danais chrysippus* L. (Lep. Danaidae) en Algérie. Bull. Soc. ent. France Paris **1923** pp. 134–135.

590.—Denis, J. R. Sur *Isotoma pallida* Moniez et un autre Collembole nouveau du Brésil: *Hypogastrura moniezii* n. sp. Bull. Soc. zool. Paris **1923** pp. 95–98 10 figs.

591.—Denis, J. R. Notes sur les Aptérygotes. Ann. Soc. ent. France **92** 1923 pp. 209–246 42 figs.

592.—Denis, J. R. Sur la faune française des Aptérygotes. iv. Note préliminaire. Bull. Soc. ent. France Paris **1923** pp. 53–58.

593.—Depoli, G. I *Dorcadion* della Liburnia. Boll. Soc. Adriat. Sci. nat. Trieste **26** Parte 2 1912 pp. 33–44. [Col.]

594.—Depoli, G. Elenco dei Coleotteri sinora osservati in Liburnia. Boll. Soc. Adriat. Sci. nat. Trieste **27** Parte 1 1913 pp. 29–55.

595.—Derenne, F. Aberrations de Lépidoptères (Rhopalocera). Rev. mens. Soc. ent. Namur **23** 1923 pp. 37–39.

596.—Derenne, F. *Erebia ligea* Linné ab. *hermenti* n. ab. Rev. mens. Soc. ent. Namur **23** 1923 p. 57. [Lep.]

597.—Derenne, F. Note sur *Agrotis interjecta* Hb. Rev. mens. Soc. ent. Namur **23** 1923 pp. 59–60. [Lep.]

- 598.—Desbordes, H. Description d'un *Platysoma* subg. *Platylisther* nouveau de Bornéo (Coleoptera). Bull. Soc. ent. France Paris 1923 pp. 11–12.
- 599.—Desbordes, H. Description de trois espèces nouvelles d'Histerides (Col.) de l'Inde. Bull. Soc. ent. France Paris 1923 pp. 60–62.
- 600.—Desbordes, H. Description d'un *Saprinus* nouveau du Brésil (Col., Histeridae). Bull. Soc. ent. France Paris 1923 pp. 151–152.
- 601.—Desbordes, H. Description d'un *Hypocacculus* nouveau du Congo Belge (Col., Histeridae). Bull. Soc. ent. France Paris 1922 1923 pp. 292–293.
- 602.—Desbordes, H. Description de deux *Reninus* nouveaux de la République Argentine et tableaux des espèces de ce genre (Col., Histeridae). Bull. Mus. Hist. nat. Paris 1923 pp. 368–371.
- 603.—Desbordes, H. Les Exosternini de la faune éthiopienne (Coleoptera Histeridae). Tableaux de détermination et catalogue. Bul. Soc. Stiinte Cluj 1 1923 pp. 365–400.
- 604.—Despax, R. Observations sur la faunule d'une mare des environs de Toulouse, avec additions au catalogue des coléoptères aquatiques de la région toulousaine. Bull. Soc. Hist. nat. Toulouse 49 1921 pp. 329–332.
- 605.—Detlefsen, J. A. & Clemente, L. S. Genetic variation in linkage values. Proc. Nat. Acad. Sci. Washington 9 1923 pp. 149–156.
- 606.—Dietz, H. F. & Snyder, T. E. Biological notes on the termites of the Canal Zone and adjoining parts of the Republic of Panama. J. Agric. Res. Washington D.C. 26 1923 pp. 279–302 8 pls. [Isopt.]
- 607.—Dingler, M. Die Schlupfwespe *Ephialtes manifestator* L. bei der Vorbereitung zur Eiablage. Zs. angew. Ent. Berlin 9 1923 pp. 153–154 5 figs. [Hym.]
- 608.—Dingler, M. Beiträge zur Kenntnis von *Lecanium hesperidum* L., besonders seiner Biologie. Zs. angew. Ent. Berlin 9 1923 pp. 191–246 24 figs. 2 pls. [Hom.]
- 609.—Diósgyőr, L. Neue Schmetterlingsaberrationen. Rovart. L. Budapest 26 1922 pp. 21–23.
- 610.—Dixey, F. A. Sexual Dimorphism. Proc. S. Lond. Ent. N. H. Soc. 1920–21 1921 pp. 12–23. [Lep.]
- 611.—Dixey, F. A. A note on *Belenois gidica* Godt. Trans. Ent. Soc. London 1922 1923 pp. lxxviii–lxxix. [Lep.]
- 612.—Djakonov, A. M. De quibusdam Lepidopteris Heteroceris palaearticis novis vel parum cognitis. Ann. Mus. zool. Acad. Sci. Russ. Petrograd 24 1923 pp. 104–123 2 pls. [In Russian.]
- 613.—Djakonov, A. Description of a gynandromorphous specimen of *Epinephela jurtina* L. (Lepidoptera, Satyridae). Rev. russe Ent. Petrograd 18 1923 pp. 125–136 5 figs.
- Dobrzhanski, Th. see Semenov-Tian-Shanski & Dobrzhanski.
- 614.—Dognin, P. Hétérocères nouveaux de l'Amérique du sud. Rennes, 19 1920 pp. 1–19; 20 1922 pp. 1–30; 21 1923 pp. 1–38; 22 1923 pp. 1–25; 23 1923 pp. 1–34; 24 1923 pp. 1–17. [Lep.]
- 615.—Dodds, C. T. A new salt marsh mealy-bug (*Eriococcus palustris* n. sp.). J. Ent. & Zool. Claremont Cal. 15 1923 pp. 57–60 10 figs. [Hom.]
- 616.—Dodds, G. S. Mayflies from Colorado. Descriptions of certain species and notes on others. Trans. Amer. Ent. Soc. Philadelphia 49 1923 pp. 93–114 2 pls. [Ephem.]
- 617.—Dodero, A. *Proteinus italicus* (Col. Staphyl.). Boll. Soc. ent. ital. Genoa 55 1923 pp. 43–47.
- 618.—Doering, K. Biology and morphology of *Lepyronia quadrangularis* (Say)—Homoptera, Cercopidae. Kansas Univ. Sci. Bull. Lawrence 14 1922 pp. 515–569 9 pls.
- 619.—Donisthorpe, H. Myrmecophilous notes for 1922. Ent. Rec. London 35 1923 pp. 1–9. [Hym.]
- 620.—Dover, C. & Ribeiro, S. A list of the Indian Cicindelidae with localities. Rec. Ind. Mus. Calcutta 25 1923 pp. 345–363.

621.—Dover, C. & Srinivasa Rao, H. A description of the larva of *Parelater coccineus* Candéze. Ent. Mo. Mag. London 59 1923 pp. 126–129 3 figs. [Col.]

622.—Drake, C. J. Heteroptera in the vicinity of Cranberry Lake. N.Y. State Coll. Forestry Syracuse Tech. Pubn. 16 1922 pp. 54–86 1 pl. 36 figs.

623.—Drake, C. J. Two new species of *Cantacaderia* (Hemip., Tingitidae). Bull. Brooklyn Ent. Soc. 18 1923 pp. 81–84 1 fig.

624.—Drake, C. J. Some Tingitidae from Japan (Hemip.). Ohio J. Sci. Columbus 23 1923 pp. 102–106 1 fig.

Drake, C. J. see Osborn & Drake.

625.—Duda, O. Die orientalischen und australischen Drosophiliden-Arten (Dipteren) des Ungarischen National-Museums zu Budapest. Ann. hist.-nat. Mus. Natnl. Hung. Budapest 20 1923 pp. 24–59.

626.—Duda, O. Revision der altweltlichen Arten der Gattung *Borborus* (*Cypselia*) Meigen (Dipteren). Arch. Natg. Berlin Abt. A 89 1923 Heft 4 pp. 35–112 14 figs.

627.—Dudich, E. Über die Organisation und systematische Stellung der Proturen. Allatt. Közlem. Budapest 18 1919 pp. 22–32 47 figs.

628.—Dudich, E. Käfersammeln im Südtiroler Grenzgebiet II. Rovart. L. Budapest 26 1922 pp. 10–21. [Col.]

629.—Dudich, E. Beiträge zur Anopluren-Fauna Ungarns. Rovart. L. Budapest 26 1923 pp. 59–61.

630.—Dudich, E. Eine neue Lucanidenart von der Insel Borneo. Rovart. L. Budapest 26 1923 pp. 68–69. [Col.]

631.—Dudich, E. Die Larve von *Anophthalmus (Duvalites) hungaricus* Csiki. Ann. hist.-nat. Mus. Natnl. Hung. Budapest 20 1923 pp. 162–165 3 figs. [Col.]

632.—Dudich, E. Über die Variation des *Cyclommatus tarandus* Thunberg (Coleopt., Lucanidae). Arch. Natg. Berlin Abt. A 89 1923 Heft 2 pp. 62–96 1 pl. 10 figs. 6 tables.

633.—Dudich, E. *Rosalia alpina* L. und ihre Formen (Coleoptera, Cerambycidae). Arch. Natg. Berlin Abt. A 89 1923 Heft 3 pp. 148–166 5 figs.

634.—Dudich, E. Eine neue *Neolucanus*-Art aus Formosa. Ent. Blätter Berlin 19 1923 pp. 17–18 2 figs. [Col.]

635.—Dudich, E. Ueber die Stridulation von *Lepyrus capucinus* Schall. Ent. Blätter Berlin 19 1923 pp. 93–94. [Col.]

636.—Dudich, E. Ueber einen somatischen Zwitter des Hirschkäfers. Ent. Blätter Berlin 19 1923 pp. 129–133 2 figs. [Col.]

637.—Duncan, C. D. Notes on the biology of two species of *Stenopelmatus* (Orth.: Tettigoniidae). Ent. News Philadelphia 34 1923 pp. 73–77 1 fig.

638.—Dunn, L. H. & Parker, R. R. Fleas found on wild animals in the Bitterroot Valley, Mont. Pub. Health Repts. Washington D.C. 38 1923 pp. 2763–2775. [Siphonaptera.]

639.—Dürken, B. Über die Wirkung farbigen Lichtes auf die Puppen des Kohlweisslings (*Pieris brassicae*) und das Verhalten des Nachkommens. Arch. mikr. Anat. Berlin 99 1923 pp. 222–389 pls. figs. [Lep.]

640.—Dürken, B. Die postembryonale Entwicklung der Tracheenkiemen und ihrer Muskulatur bei *Ephemeralia ignita*. Zool. Jahrb. Jena Abt. Anat. 44 1923 pp. 439–614 pls. figs. [Ephem.]

641.—Dutt, G. R. An annotated list of Ichneumonidae in the Pusa collection. Mem. Dept. Agr. India Pusa Ent. Ser. 8 1923 pp. 13–27 1 pl. [Hym.]

642.—Dyar, H. G. The North American short-winged Psychidae. (Lepidoptera.) Insec. Insc. Menst. Washington D.C. 11 1923 pp. 1–51 1 pl.

643.—Dyar, H. G. Note on *Cucullia alfarata* (Lepidoptera, Noctuidae). Insec. Insc. Menst. Washington D.C. 11 1923 pp. 5–7.

644.—Dyar, H. G. A Note on *Datana perspicua* (Lepidoptera, Notodontidae) Insec. Insc. Menst. Washington D.C. 11 1923 pp. 10–11.

645.—Dyar, H. G. New American Lepidoptera. Insec. Insc. Menst. Washington D.C. **11** 1923 pp. 12–35.

646.—Dyar, H. G. Mosquitoes described by von Humboldt (Diptera, Culicidae). Insec. Insc. Menst. Washington D.C. **11** 1923 pp. 121–122.

647.—Dyar, H. G. Food-Plant of *Hyblaea pueria* Cramer (Lepidoptera, Noctuidae). Insec. Insc. Menst. Washington D.C. **11** 1923 p. 148.

648.—Dyar, H. G. The mosquitoes of Panama (Diptera, Culicidae). Insec. Insc. Menst. Washington D.C. **11** 1923 pp. 167–186.

649.—Dyar, H. G. [Mosquito Notes.] Insec. Ins. Menst. Washington D.C. **11** 1923 pp. 36–46, 64–72, 81–92, 92–96, 118–121 & 186–190 3 pls. [Dipt.]

650.—Ebner, R. Ergebnisse einer mit Unterstützung der Kais. Akademie der Wissenschaften in Wien ausgeführten zoologischen Forschungsreise von Prof. Dr. Franz Tölg nach Kleinasien (Amanusgebirge). Erster Teil. vi. Orthopteren. Arch. Natg. Berlin **85** Abt. A Heft 10 (1919) 1920 pp. 148–176 figs.

651.—Ebner, R. Orthopteren aus Armenien und Kaukasien. Časopis Českoslov. Společ. Ent. Prague **20** 1923 pp. 5–13 3 figs.

652.—Edwards, F. W. Oligocene mosquitoes in the British Museum ; with a summary of our present knowledge concerning fossil Culicidae. Qtrly. J. Geol. Soc. London **79** 1923 pp. 139–154 1 pl. 4 figs. [Dipt.]

653.—Edwards, F. W. New species of crane-flies collected by Mr. G. V. Hudson in New Zealand. Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 625–631. [Dipt.]

654.—Edwards, F. W. Diptera Nematocera from Rodriguez Island. Ann. Mag. Nat. Hist. London (9) **12** 1923 pp. 330–337.

655.—Edwards, F. W. Notes on the dipterous family Anisopodidae. Ann. Mag. Nat. Hist. London (9) **12** 1923 pp. 475–493 1 pl. 3 figs. [Dipt.]

656.—Edwards, F. W. A new Javan fungus-feeding gall-midge. Ann. Mag. Nat. Hist. London (9) **12** 1923 p. 540. [Dipt.]

(N-12519 j) Q

657.—Edwards, F. W. Notes on some British species of *Microdon* (Diptera, Syrphidae). Ent. Mo. Mag. London **59** 1923 pp. 233–234.

658.—Edwards, F. W. Four new African mosquitos. Bull. Ent. Res. London **13** 1923 pp. 397–399. [Dipt.]

659.—Edwards, F. W. Mosquito notes. iv. Bull. Ent. Res. London **14** 1923 pp. 1–9. [Dipt.]

660.—Edwards, F. W. Mosquitoes reared by Dr. W. E. Haworth from coconut palms in East Africa. Trans. R. Soc. Trop. Med. & Hyg. London **16** 1923 pp. 498–501. [Dipt.]

661.—Edwards, F. W. New and old observations on Ceratopogonine midges attacking other insects. Ann. Trop. Med. & Parasit. Liverpool **17** 1923 pp. 19–29 1 fig. [Dipt.]

662.—Edwards, F. W. On some Algerian species of *Simulium*. Arch. Inst. Pasteur Algérie Algiers **1** 1923 pp. 647–653 2 figs. [Dipt.]

663.—Edwards, F. W. A preliminary revision of the crane-flies of New Zealand (Anisopodidae, Tanyderidae, Tipulidae). Trans. N. Z. Inst. Wellington **54** 1923 pp. 265–352 4 figs. 10 pls. [Dipt.]

664.—Edwards, F. W. New and little-known Nematocerous Diptera from Java. Treubia Buitenzorg **3** 1923 pp. 180–183.

665.—Ege, R. Respirationsforholdene hos *Hydrocampus nymphaeata* (Larve og Puppe). Vidensk. Medd. Copenhagen **76** 1923 pp. 29–42 4 figs. [Lep.]

666.—Eggers, — Über Korrelation in der Ausbildung der Flügel und der Tympanalorgane bei Insekten. Verh. D. zool. Ges. Berlin **28** 1923 pp. 42–44.

667.—Eggers, F. Ergebnisse von Untersuchungen am Johnstonschen Organ der Insekten und ihre Bedeutung für die allgemeine Beurteilung der stiftführenden Sinnesorgane. Zool. Anz. Leipzig **57** 1923 pp. 224–240 figs.

668.—Eggers, H. Seltene und neue paläarktische Borkenkäfer, v. Ent. Blätter Berlin **19** 1923 pp. 133–139. [Col.]

- 669.—Eggers, H. Neue indomalaysische Borkenkäfer (Ipidae). Zool. Meded. Leiden **7** 1923 pp. 129–220 2 figs. [Col.]
- 670.—Eichler, W. Verzeichnis der in Kleinasiatischen Sandschaks Trapezunt und Gümisch-Chane in J. 1916–1917 gesammelten Coleopteren, II. Polskie Pismo Ent. Lemberg **2** 1923 pp. 54–63.
- 671.—Eidmann, H. Das sogenannte 'Praemaxillare' der Insekten. Zool. Anz. Leipzig **58** 1923 pp. 43–52.
- 672.—Elston, A. H. Australian Coleoptera. Part IV. Trans. R. Soc. S. Australia Adelaide **47** 1923 pp. 212–215 1 pl.
- 673.—Eltringham, H. Butterfly Lore. Oxford 1923 pp. 1–180 1 pl. 52 figs.
- 674.—Eltringham, H., Willmer, E. N. & Williams, C. B. On the larva of *Pterocroce storeyi* Wirth. (Nemopteridae). Trans. Ent. Soc. London **1923** pp. 263–268 1 pl. [Neur.]
- 675.—Emden, F. van. Beschreibung der Larve von *Ophonus diffinis* Dej. nebst Nachtrag zu meiner Beschreibung der Larve von *Pteropsophus hispanicus* Dej. Arch. Natg. **84** Abt. A Heft. 10 (1918) 1920 pp. 150–156 figs. [Col.]
- 676.—Émery, C. Formiche ibride. Rend. Acc. Sci. Bologna **21** 1917 pp. 23–29. [Hym.]
- 677.—Émery, C. Esperienze intorno alla produzione di individui sessuati nella società delle formiche. Rend. Acc. Sci. Bologna **22** 1918 pp. 65–72. [Hym.]
- 678.—Émery, C. Formiche dell' Isola Cocos. Rend. Acc. Sci. Bologna **23** 1919 pp. 36–40. [Hym.]
- 679.—Émery, C. Le specie americane del genere *Melophorus* (*Lasiophanes*). Rend. Acc. Sci. Bologna **26** 1921 pp. 90–95. [Hym.]
- 680.—Émery, C. Formiche tessitrici del genere *Oecophylla* fossili e viventi. Rend. Acc. Sci. Bologna **26** 1921 pp. 99–105 figs. [Hym.]
- 681.—Émery, C. La distribuzione geografica attuale delle formiche. Tentativo di spiegarne la genesi col soccorso di ipotesi filogenetiche e paleogeografiche. Mem. Acc. Lincei Rome (5) **13** 1920 pp. 357–450. [Hym.]
- 682.—Émery, C. Le genre *Polyrhachis*. Classification; espèces nouvelles ou critiques. Bull. Soc. Sci. nat. Lausanne **54** 1921 pp. 17–25 3 figs. [Hym.]
- 683.—Émery, C. Hymenoptera, fam. Formicidae, subfam. Myrmicinae. Gen. Ins. Brussels fasc. **174 C** 1922 pp. 207–397.
- 684.—Émery, C. Einige exotische Ameisen des Deutschen Entomologischen Instituts. Ent. Mitt. Berlin **12** 1923 pp. 60–62. [Hym.]
- 685.—Enderlein, G. Zur Kenntnis aussereuropäischen Braconiden. Arch. Natg. Berlin **84** Abt. A Heft 11 (1918) 1920 pp. 51–224 figs. [Hym.]
- 686.—Enderlein, G. Neue ausser-europäische Simuliiden. SitzBer. Ges. natf. Freunde Berlin **1921** 1922 pp. 77–81. [Dipt.]
- 687.—Enderlein, G. Zur Kenntnis der Scatopsiden Süd-Afrikas. Stettin. ent. Ztg. **84** 1923 p. 67. [Dipt.]
- 688.—Enderlein, G. Neue Beiträge zur Kenntnis der Micropeziden (Dipt.). D. ent. Zs. Berlin **1923** pp. 540–543.
- 689.—Enderlein, G. Psyllidologica vii. D. ent. Zs. Berlin **1923** pp. 543–544. [Hom.]
- 690.—Enderlein, G. Vorläufige Diagnosen neue Tabanidengenera (Dipt.). D. ent. Zs. Berlin **1923** pp. 544–555.
- 691.—Enderlein, G. Zur Kenntnis afrikanischer und orientalischer Culiciden. Wiener ent. Ztg. Vienna **40** 1923 pp. 25–29 2 figs. [Dipt.]
- 692.—Enderlein, G. Eine neue Anthomyiine aus Südrussland. Arb. Biol. Wolga-Sta. Saratov **7** 1923 p. 72. [Dipt.]
- 693.—Enslin, E. Die paläarktischen Rhadinoceraea-Arten. Arch. Natg. Berlin **85** Abt. A Heft 2 (1919) 1920 pp. 316–320. [Hym.]
- 694.—Enslin, E. Beiträge zur Kenntnis der Hymenopteren III. D. ent. Zs. Berlin **1923** pp. 169–187 4 figs.

- 695.—Esaki, T. An interesting new water-strider from Formosa. Philipp. J. Sci. Manila **22** 1923 pp. 387–392 1 pl. [Heteropt.]
- 696.—Esben-Petersen, P. Neuropteren der inneren Sahara. Arch. Natg. **84** Abt. A Heft 9 (1918) 1920 pp. 143–159 figs.
- 697.—Esben-Petersen, P. Bidrag til en Fortegnelse over Danmarks Ichneumonider (Snyltekrypse). II. [Contributions to a catalogue of the Danish Ichneumonidae. II.] Flora og Fauna Copenhagen Afhandlinger og Meddelelser **1** 1923 pp. 89–96. [In Danish.]
- 698.—Esben-Petersen, P. Australian Neuroptera. Parts IV&V. Proc. Linn. Soc. N. S. W. Sydney **48** 1923 pp. 576–600 3 pls.
- 699.—Escalera, M. M. de la. Sistema de las especies del genero *Asida* de la Peninsula Iberica. Subgen. *Glabrasida*. Bol. R. Soc. esp. Hist. nat. Madrid **22** (1922) 1923 pp. 463–473; **23** 1923, 37–42, 79–87. [Col.]
- 700.—Escalera, M. M. de la. Tenebrionidos nuevos de Marruecos y Rio de Oro. Bol. R. Soc. esp. Hist. nat. Madrid **23** 1923 pp. 128–132. [Col.]
- 701.—Escalera, M. M. de la. Especies nuevas de *Thorictus* de Marruecos y riberas del Mediterraneo. Bol. R. Soc. esp. Hist. nat. Madrid **23** 1923 pp. 376–380 figs. [Col.]
- 702.—Escalera, M. M. de la. Especies nuevas de *Elaphocera* de Espana. Bol. R. Soc. esp. Hist. nat. Madrid **23** 1923 pp. 400–410. [Col.]
- 703.—Escalera, M. M. de la. Especies de *Trachyploenus* Germ. de Espana y N. de Africa. Ia nota. Bol. R. Soc. esp. Hist. nat. Madrid **23** 1923 p. 433–443 figs. [Col.]
- 704.—Escherich, K. Die Forstinsekten Mitteleuropas. Zweiter Band Spezieller Teil. Erste Abteilung. Berlin, Parey 1923 xii + 663 pp. 335 figs.
- 705.—Escomel, E. Les Pseudomeloïdes du Pérou et la Pseudoméloïdine. Emploi de ces insectes en thérapeutique à l'époque des Incas. Bull. Soc. Path. exot. Paris **16** 1923 pp. 615–621. [Col.]
- (n-12519 j) q .
- 706.—Evans, A. M. A new species and a new variety of *Culex* from the Belgian Congo. Ann. Trop. Med. Parasit. Liverpool **17** 1923 pp. 89–91 1 fig. [Dipt.]
- 707.—Evans, A. M. Notes on Culicidae in Venezuela, with descriptions of new species. Ann. Trop. Med. & Parasit. Liverpool **17** 1923 pp. 101–111 5 figs. [Dipt.]
- 708.—Evans, A. M. Note on *Aëdinus amazonensis*. Ann. Trop. Med. & Parasit. Liverpool **17** 1923 pp. 377–380 2 figs. [Dipt.]
- 709.—Evans, W. H. The identification of Indian Butterflies. J. Bombay Nat. Hist. Soc. **29** 1923 pp. 230–260 9 pls., pp. 519–537 3 pls., pp. 780–797 4 pls.
- 710.—Everts, E. Nieuwe vondsten voor de Nederlandsche Coleopterfauna, XLI. Ent. Ber. Ned. Ent. Ver. The Hague **6** 1923 pp. 209–224.
- 711.—Everts, E. Derde lijst van verbeteringen en drukfouten in "Col. Neerl. III," 1922. Ent. Ber. Ned. Ent. Ver. The Hague **6** 1923 p. 224. [Col.]
- 712.—Ext, W. Zur Biologie und Bekämpfung der Rübenblattwanze *Zosmenus capitatus* Wolff. Arb. Biol. Reichsanst. Land- u. Forstw. Berlin **12** 1923 pp. 1–30 12 figs. [Hem.]
- 713.—Ewing, H. E. New genera and species of sucking lice. J. Washington Acad. Sci. **13** 1923 pp. 146–149. [Anoplura.]
- Fagan, M. M. see Gahan & Fagan.
- 714.—Fagniez, C. Nouveaux Coléoptères cavernicoles des Alpes-Maritimes. Bull. Soc. ent. France Paris 1922 1923 pp. 317–318.
- 715.—Fagnoul, F. *Parnassius apollo* L. ab. *rubrofasciata* ab. n. Mitt. Badischen Ent. Ver. Freiburg i. Br. **1** 1923 pp. 28–29. [Lep.]
- 716.—Fahringer, J. Zur Kenntnis der Lebensweise von *Sphex pachysoma* Kohl. Zs. wiss. Insektenbiol. Berlin **18** 1923 pp. 101–105 4 figs. [Hym.]
- 717.—Falcoz, L. Biospeologica, XLIX. Pupipara (Diptères). Première Série. Arch. zool. Paris **61** 1923 pp. 521–552 figs.

718.—**Falcoz**, L. Diptères Pupipares de la Nouvelle-Calédonie et des Isles Loyalty (Streblidae et Nycteriidae). *Nova Caledonia A Zool.* 31 pp. 81–96 figs. 1923.

719.—**Falcoz**, L. Description de la larve de *Coroebus sinuatus* Creutzer (Col. Buprestidae). *Ann. Soc. ent. France Paris* 92 1923 pp. 247–252 1 pl. 2 figs.

720.—**Falcoz**, L. Sur le genre *Micrambe* Thomson (Col. Cryptophaginae). *Bull. Soc. ent. France Paris* 1923 pp. 205–206.

721.—**Falcoz**, L. Études sur les Cryptophaginae (Coléoptères Erotylides). II. *Henoticus californicus* Mannerheim, espèce américaine en voie d'acclimatation européenne. *Ann. Soc. linn. Lyon* 69 1923 pp. 167–183 10 figs.

722.—**Fall**, H. C. *Zarrhipis* Le Conte (Coleoptera). *Canad. Ent. Orillia* 55 1923 pp. 109–112 184.

723.—**Falzoni**, A. Coleotteri di Cirenaica raccolti dal Prof. Alessandro Ghigi nella escursione organizzata dal Touring Club Italiano 15–24 Aprile 1920. *Atti Soc. ital. Sci. nat. Milano* 62 1923 pp. 81–90.

724.—**Fassnidge**, W. List of the Macrolepidoptera including the Pyrales, Crambi and Pterophorina of Hampshire and the Isle of Wight. *Ent. Rec. London* 35 1923 sep. pp. 1–16.

725.—**Fauconnet**, L. Fauna analitica dei Coleotteri di Francia. *Riv. Coleot. Genoa* 1 1923 Suppl. 4 pp.

726.—**Faure**, J. C. & **Paillet**, A. Observations biologiques sur *Hemiteles areator* Grav. *C.R. Soc. Biol., Paris* 89 1923 pp. 1301–1302 [Hym.]

727.—**Federley**, H. Über polymere Faktoren bei Lepidopteren. *Zs. indukt. Abstammungslehre Berlin* 30 1923 pp. 284–286.

728.—**Federley**, H. Ueber einen Fall von Criss-Cross-Vererbung bei einer Artkreuzung. *Hereditas Lund* 3 1922 pp. 125–146 11 figs. [Lep.]

729.—**Federley**, H. Bilden chromosomenkonjugation, Mendelspaltung und Fertilität bei Speciesbastarden einen

Dreibund? *Hereditas Lund* 4 1923 pp. 161–170.

729a.—[**Federov**, S. M.] *Федоров, С. М. Cledeobia moldavica* Esp. (Lepidoptera, Pyralidae); morphologie, biologie, importance. *Bull. Soc. ent. Moscou* 2 no. 2 1923 pp. 45–56, 9 pls. [In Russian.]

730.—**Felt**, E. P. A new *Diadiplopsis*. *Zoologica New York* 3 1921 pp. 225–226. [Dipt.]

731.—**Felt**, E. P. A new and remarkable fig midge. *Florida Ent. Gainesville* 6 1922 pp. 5–6. [Dipt.]

732.—**Ferguson**, E. W. Revision of the Amycterides (Coleoptera) Part VIII. The *Euomides*. *Proc. Linn. Soc. N. S. W. Sydney* 48 1923 pp. 381–435.

733.—**Fernández**, A. Acerca de ciertas novedades entomológicas de España. *Bol. R. Soc. esp. Hist. nat. Madrid*, 23 1923 pp. 19–20. [Lep.]

734.—**Ferrière**, C. Le parasitisme externe des *Oncophanes* (Braconidae). *Schweizer ent. Anz. Zürich* 1 1922 pp. 3–4. [Hym.]

**Ferrière**, C. see *Barbey & Ferrière*.

735.—**Ferris**, G. F. Contributions toward a monograph of the sucking lice. Parts I, II and IV. *Stanford Univ. Pubns. Biol. Sci.* 2 pt. 1 1919 pp. 1–51, 32 figs.; pt. 2 1921 pp. 59–133, 56 figs.; pt. 4 1923 pp. 183–270 54 figs. [Anoplura.]

736.—**Ferris**, G. F. Insects, Arachnids and Chilopods of the Pribilof Islands, Alaska: Mallophaga. *North Amer. Fauna Washington D.C.* no. 46 1923 p. 141.

737.—**Ferris**, G. F. Observations on the Chermidae (Hemiptera; Homoptera). Part I. *Canad. Ent. Orillia* 55 1923 pp. 250–256, 2 pls.

738.—**Ferris**, G. F. Observations on the larvae of some Diptera pupipara, with description of a new species of Hippoboscidae. *Parasitology Cambridge* 15 1923 pp. 54–58 4 figs.

739.—**Ferris**, G. F. Two new Cicadidae from Cyrenaica. *Boll. Lab. Zool. gen. agrar. R. Scuola sup. Agric. Portici* 16 1923 pp. 207–210, 2 figs. [Hom.]

740.—**Ferris, G. F. & Hyatt, P.** The life history of *Euphyllura arbuti* Schwarz (Hemiptera; Chermidae). Canad. Ent., Orillia 55 1923 pp. 88–92, 1 pl.

741.—**Ferris, G. F. & Kelly, J. B.** Some Coccidae from about the Gulf of California. Proc. Cal. Acad. Sci. San Francisco 4th Ser. 12 1923 pp. 315–318 1 fig.

742.—**Ferry, R. M., Lancefield, R. C. & Metz, C. W.** Additional mutant characters in *Drosophila willistoni*. J. Heredity Baltimore 14 1923 pp. 373–384 figs.

**Ferry, R. M.** see Metz & Ferry.

743.—**Ferton, C.** La vie des Abeilles et des Guêpes. Oeuvres choisies, groupées et annotées par Et. Rabaud et F. Picard. Paris, Chéron 1923 376 pp. [Hym.]

744.—**Feytaud, J.** Les formes reproductrices du Termite lucifuge. Proc. verb. Soc. linn. Bordeaux 72 1920 pp. 160–164 3 figs. [Isopt.]

745.—**Finkler, W.** Kopftransplantation an Insekten i–iii. Anz. Ak. Wiss. Wien 58 1921 57–58; 59 1922 pp. 13–15.

746.—**Finkler, W.** Experimentelle Erzeugung von Pigmentierung und Zeichnung der Flügeldecken am Rückenschwimmer (*Notonecta glauca*). Anz. Ak. Wiss. Wien 59 1922 p. 208. [Hem.]

747.—**Finkler, W.** Die Ueberpflanzung von Insektenköpfen. Wiener ent. Ztg. 40 1923 pp. 77–80.

748.—**Finkler, W.** Kopftransplantation an Insekten. Arch. mikr. Anat. Berlin 99 1923 pp. 104–133 pls. figs.

749.—**Finzi, B.** Resultati scientifici della spedizione Ravasini-Lona in Albania. III. Formiche. Boll. Soc. ent. ital. Genoa 15 1923 pp. 1–4, 1 fig. [Hym.]

750.—**Fischer, E.** Erblichkeitsverhältnisse bei *Argynnis paphia-valesina* Esp. Schweizer ent. Anz. Zürich 2 1923 pp. 3–5. [Lep.]

751.—**Fischer-Sigwart, H.** Schmetterlinge vom Amazonenstrome in Brasilien im Zofinger Museum. Soc. ent. Stuttgart 38 1923 pp. 21–23. [Lep.]

752.—**Fisher, W. S.** A change of name in Buprestidae. Proc. Ent. Soc. Washington D.C. 25 1923 p. 190. [Col.]

753.—**Fison, A. J.** Some notes on Swiss Butterflies. Ent. Rec. London 35 1923 pp. 12–13. [Lep.]

754.—**Fleischer, A.** Nove aberrace a synonym. Poznamka. [New aberration and synonymy.] Časopis Českoslov. Společ. Ent. Prague 19 (1922) 1923 pp. 79–80 1 fig. [Col.]

755.—**Fleischer, A.** *Liodes (Oreosphaerula) rambouseki* n. sp. Časopis Českoslov. Společ. Ent. Prague 20 1923 p. 55. [Col.]

756.—**Fleischer, A.** Nový druh rodu *Aerotrichis* Motsch. = *Trichopteryx* Kirby. Časopis Českoslov. Společ. Ent. Prague 20 1923 p. 88. [Col.]

757.—**Fleischer, A.** *Lytta vesicatoria* Lin. var. *dibapha* Reitt. Časopis Českoslov. Společ. Ent. Prague 20 1923 p. 89. [Col.]

758.—**Fleischer, A.** *Formanechia*, ein neues Genus der Brachyderini (Col., Curcul.). Wiener ent. Ztg. 40 1923 pp. 15–16.

759.—**Fletcher, T. B.** Note on identification of *Schoenobius (Siga) incertellus* Wlk. Mem. Dept. Agric. Ind. Calcutta Ent. Ser. 7 1923 pp. 276–278. [Lep.]

760.—**Fletcher, T. B.** List of Publications on Indian Entomology 1922. Pusa Agric. Res. Inst. Calcutta Bull. 147 1923 42 pp.

761.—**Flotiaux, E.** Descriptions de deux espèces nouvelles d'Elateridae du genre *Diploconus* Candèze. Bull. Soc. ent. France Paris 1923 pp. 12–14. [Col.]

762.—**Flotiaux, E.** Les Melasidae du Japon (Coléoptères). Ann. Soc. ent. France Paris 91 1923 pp. 291–328 1 pl.

763.—**Foley, H. & Picout-Laforest, A.** Quelques observations sur la répartition et la biologie d'*Holoconops mediterraneus* (Cératopogonines) dans les régions sahariennes. Arch. Inst. Pasteur Algérie Algiers 1 1923 pp. 684–687 [Dipt.]

764.—**Folsom**, J. W. Entomology with special reference to its ecological aspects. London, Murray 3rd edn. 1923 vii + 502 pp. 5 pls. 308 figs. [Reviewed in *Nature* London **112** 1923 p. 757.]

765.—**Folsom**, J. W. A new Lepispid from Porto Rico. Proc. Ent. Soc. Washington **25** 1923 p. 170 1 pl. [Thysanura.]

766.—**Folsom**, J. W. Termitophilous Apterygota from British Guiana. Zoologica New York **3** 1923 pp. 383–402 6 pls. [Aptera.]

**Fonseca**, J. P. da see Luederwaldt, H.

767.—**Fontes**, J. & **Veloso**, F. Sur les mouvements automatiques des muscles des pattes de *Blatta germanica*. C.R. Soc. Biol. Paris **88** 1923 pp. 835–837 2 figs., pp. 1318–1319 2 figs. [Orth.]

768.—**Forbes**, W. T. M. Insects, Arachnids and Chilopods of the Pribilof Islands, Alaska : Lepidoptera. North Amer. Fauna Washington D.C. no. **46** 1923 pp. 147–149.

769.—**Forbes**, W. T. M. Five strange Lepidoptera (Oinophilidae, Noctuidae, Gelechiidae). Ent. News Philadelphia **33** 1922 pp. 97–104 1 pl.

770.—**Forel**, A. Quelques fourmis des environs de Quito (Ecuador) récoltées par Mlle. Eléonore Naumann. Bul. Soc. Sci. nat. Lausanne **54** 1921 pp. 131–135. [Hym.]

771.—**Forel**, A. Remarque sur "C. Emery, Hymenoptera, Fam. Formicidae" dans Genera Insectorum de P. Wytsman. Bul. Soc. Sci. nat. Lausanne **54** 1921 pp. 205–207.

772.—**Forel**, A. Glanures myrmécologiques en 1922. Revue suisse Zool. Geneva **30** 1923 pp. 87–102.

773.—**Formánek**, R. Zwei neue Arten der Rüsselkäfergattung *Tychius* Germ. Wiener ent. Ztg. **40** 1923 pp. 60–62. [Col.]

774.—**Formánek**, R. Zwei neue europäische Rüsselkäfergattungen. Wiener ent. Ztg. **40** 1923 pp. 108–110. [Col.]

775.—**Forsius**, R. Kleinere Beiträge zur Kenntnis der Tenthredinoïden iv. Notulae Ent. Helsingfors **3** 1923 pp. 51–54. [Hym.]

776.—**Forsius**, R. Eine neue *Belomicrus (Oxybeloides)*-Art aus Nord-europa (Hym.). Notulae Ent. Helsingfors **3** 1923 pp. 65–66 2 figs.

777.—**Forsius**, R. & **Nordström**, Å. Zur Kenntnis der Vespiden Finnlands. Notulae Ent. Helsingfors **3** 1923 pp. 1–9 1 map. [Hym.]

778.—**Forsius**, R. & **Nordström**, Å. Weitere Beiträge zur Kenntnis der Apiden Finnlands. Notulae Ent. Helsingfors **3** 1923 pp. 112–115. [Hym.]

779.—**Fouts**, R. Description of a new Serphoid parasite (Hymen.). Proc. Ent. Soc. Washington **25** 1923 pp. 64–65 1 fig.

780.—**Fox**, C. L. Expedition of the California Academy of Sciences to the Gulf of California in 1921. The Bembicinae (digger wasps). Proc. Cal. Acad. Sci. San Francisco 4th Ser. **12** 1923 pp. 429–436. [Hym.]

781.—**Fox**, C. L. Two new Bembecids (Hymenoptera) from the Channel Islands, California. Psyche Boston Mass. **30** 1923 pp. 6–8.

782.—**França**, C. Observations sur le genre *Phlebotomus*. Bul. Soc. port. Sci. nat. Lisbon **9** 1921 pp. 9–18 3 figs. [Dipt.]

783.—**Fraser**, F. C. A second note on Odonata in the Pusa collection. Mem. Dept. Agr. India Calcutta Ent. Ser. **8** 1923 pp. 29–34 3 figs.

784.—**Fraser**, F. C. A collection of dragonflies from Bangkok. J. Nat. Hist. Soc. Siam Bangkok **4** 1922 pp. 231–238 pl. [Odon.]

785.—**Fraser**, F. C. Indian Dragonflies, pts. xv–xvii. J. Bombay Nat. His. Soc. **29** 1923 pp. 36–47 6 figs., pp. 324–333 3 figs., pp. 659–680 2 pls. 4 figs. [Odon.]

786.—**Fraser**, F. C. Dragonfly collecting in India, pts. ii–iv. J. Bombay Nat. Hist. Soc. **29** 1923 pp. 48–69 2 figs., pp. 474–481 3 figs., pp. 741–756 3 pls. [Odon.]

787.—**Fremlin**, H. S. The growing importance of Entomology. Ent. Rec. London **35** 1923 pp. 136–139.

788.—**Frers**, A. G. Metamorfosis de coleópteros argentinos. Physis Buenos Aires **6** 1923 pp. 254–262 3 pl.

- 789.—Frers, A. G. Algunas monstruosidades en coleópteros. *Physis* Buenos Aires **6** 1923 pp. 347–350 2 figs.
- 790.—Fresca, A. G. Malofagos del Museo de Madrid. *Bol. R. Soc. esp. Hist. nat. Madrid* **23** 1923 pp. 196–199 246–249 figs. [Mallophaga.]
- 791.—Frew, J. G. H. On the larval anatomy of the gout-fly of barley (*Chlorops taeniopus* Meig.), and two related Acalyptrate Muscids, with notes on their winter host-plants. *Proc. Zool. Soc. London* **1923** pp. 783–821 23 figs. [Dipt.]
- 792.—Frew, J. G. H. On the morphology of the head capsule and mouth-parts of *Chlorops taeniopus* Meig. (Diptera) *J. Linn. Soc. (Zool.) London* **35** 1923 pp. 399–410 7 figs.
- 793.—Frew, J. G. H. On the larval and pupal stages of *Forcipomyia piceus*, Winn. *Ann. App. Biol. Cambridge* **10** 1923 pp. 409–441 14 figs. [Dipt.]
- 794.—Frey, R. Die philippinischen Arten der Gattung *Promachus* Loew (Dipt., Asilidae). *Notulae Ent. Helsingfors* **3** 1923 pp. 20–23.
- 795.—Frey, R. Philippinische Dipteren. I. Fam. Chloropidae. *Notulae Ent. Helsingfors* **3** 1923 pp. 71–83 97–112.
- Frey, R. see Poppius, Lundström & Frey.
- 796.—Friederichs, K. Okologische Beobachtungen über Embiidinen. *Capita Zoologica The Hague* **2** pt. 1 1923 29 pp. 7 figs. 2 pls. [Embioptera.]
- 797.—Friese, H. Apidae. Wissenschaftliche Ergebnisse der schwedischen entomologischen Reise des Herrn Dr. A. Roman in Amazonas 1914–1915. 8. *Ark. Zool. Stockholm* **15** 1923 no. 13 8 pp. [Hym.]
- 798.—Friese, H. Ein instruktives Bienennest aus den Hochanden Chiles. (Hym.) *Zs. wiss. Insektenbiol. Berlin* **18** 1923 pp. 56–57.
- 799.—Friese, H. Die europäischen Bienen (Apidae). Parts 2–4, 33 plates, 100 figs. Berlin & Leipzig, Walter de Gruyter & Co. 1922–23. [Hym.]
- 800.—Frisby, G. E. The Aculeate Hymenoptera of the British Isles. *Proc. S. London Ent. N. H. Soc.* **1920–21** 1921 pp. 1–11.
- 801.—Frisch, K. v. Über den Geruchssinn der Biene und seine Bedeutung für den Blumenbesuch. *Verh. zool.-bot. Ges. Wien* **68** 1918 pp. (129)–(144). [Hym.]
- 802.—Frisch, K. v. Über die "Sprache" der Bienen. Eine tierpsychologische Untersuchung. *Zool. Jahrb. Jena Abt. f. allg. Zool.* **40** 1923 pp. 1–186 2 pls. 25 figs. [Hym.]
- 803.—Froggatt, W. W. Forest Insects of Australia. Sydney N. S. W. Forestry Commiss. 1923 viii + 171 pp. 46 pls. 32 figs.
- 804.—Frost, C. A. New species of Buprestidae from the United States (Coleoptera). *Canad. Ent. Orillia* **55** 1923 pp. 279–281.
- 805.—Fruhstorfer, H. Übersicht der formen der Spaltgattung *Niphanda* Moore. *Arch. Natg. Berlin Abt. A* **83** Heft 1 (1917) 1919 pp. 69–73 2 figs. [Lep.]
- 806.—Fruhstorfer, H. *Spalgis*, eine bicontinentale Lycaenidengattung. *Arch. Natg. Berlin Abt. A* **83** Heft 1 (1917) 1919 pp. 73–76 1 fig. [Lep.]
- 807.—Fruhstorfer, H. Revision der Artengruppe *Pithecopus* auf Grund der Morphologie der Klammerorgane. *Arch. Natg. Berlin Abt. A* **83** Heft 1 (1917) 1919 pp. 77–84 4 figs. [Lep.]
- 808.—Fruhstorfer, H. Revision der Gattung *Poritia* auf Grund der Morphologie der Generationsorgane. *Arch. Natg. Berlin Abt. A* **83** Heft 2 (1917) 1919 pp. 77–101 1 pl. [Lep.]
- 809.—Fruhstorfer, H. Neue *Melitaea*-Rassen aus dem südlichsten Tessin. *Arch. Natg. Berlin Abt. A* **83** Heft 3 (1917) 1919 pp. 167–170. [Lep.]
- 810.—Fruhstorfer, H. Altes und Neues über *Melitaea aurelia*. *Arch. Natg. Berlin Abt. A* **83** Heft 3 (1917) 1919 pp. 171–176. [Lep.]
- 811.—Fruhstorfer, H. Altes und Neues über *Melitaea athalia*. *Arch. Natg. Berlin Abt. A* **83** Heft 3 (1917) 1919 pp. 176–186. [Lep.]

- 812.—**Fruhstorfer, H.** Neue süd-europäische *Melitaea*-Formen. Arch. Natg. Berlin Abt. A **83** Heft 6 (1917) 1919 pp. 11–13. [Lep.]
- 813.—**Fruhstorfer, H.** Altes und Neues über Erebien. Arch. Naturg. Abt. A **84** Heft 7 (1918) 1920 pp. 83–108. [Lep.]
- 814.—**Fruhstorfer, H.** Neue *Parnassius* Rassen aus Nordamerika. Soc. ent. Stuttgart **38** 1923 p. 5. [Lep.]
- 815.—**Fruhstorfer, H.** Neue *Parnassius apollo*-Rassen. Ent. Anz. Vienna **3** 1923 pp. 41–42. [Lep.]
- 816.—**Fruhstorfer, H.** Nachtrag zum Artikel "Neues über altbekannte *Parnassius apollo* Rassen." Ent. Anz. Vienna **3** 1923 pp. 44–45. [Lep.]
- 817.—**Fruhstorfer, H.** Die *Parnassius apollo*-Rassen der Schweiz. Ent. Anz. Vienna **3** 1923 pp. 55–60, 72–74, 86–87, 96–98. [Lep.]
- 818.—**Fruhstorfer, H.** Neue und seltene *Parnassius*-Rassen. Ent. Anz. Vienna **3** 1923 pp. 108–109, 131–133. [Lep.]
- 819.—**Fryer, J. C. F. & Fryer, H. F.** *Sitones gemellatus* Gyll. in Britain. Ent. Mo. Mag. London **59** 1923 pp. 80–81. [Col.]
- 820.—**Fuller, C.** Two new Termites from Uganda. Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 191–192 1 fig. [Isopt.]
- 821.—**Fuente y Morales, J. M. de la.** Catálogo sistemático-geográfico de los coleópteros observados en la península ibérica, Pirineos propiamente dichos y Baleares. Bol. Soc. ent. España Saragossa **5** 1922 pp. 126–141; **6** 1923 pp. 21–36, 40–55, 62–77, 87–102, 118–133. [Col.]
- 822.—**Fullaway, D. T.** Notes on the mealy-bugs of economic importance in Hawaii. Proc. Hawaiian Ent. Soc. 1922 Honolulu **5** 1923 pp. 305–321 1 pl. [Hom.]
- 823.—**Funck, N.** Ein Ameisen-Abenteuer. Bull. Soc. Nat. Luxembourg **26** 1916 pp. 228–231. [Hym.]
- 824.—**Funkhouser, W. D.** Walker's species of Membracidae from United States and Canada. Ann. Ent. Soc. Amer. Columbus Ohio **16** 1923 pp. 97–112 1 pl. [Hom.]
- 825.—**Funkhouser, W. D.** Hemiptera of Connecticut: Membracidae. Conn. N. H. Surv. Hartford Bull. **34** 1923 pp. 163–206 1 pl. 3 figs.
- 826.—**G., E.** Tabelle elementari per la classificazione delle specie italiane. Gli Staphylinini italiani. Riv. Coleotterologia Genoa **1** 1923 pp. 16–28. [Col.]
- 827.—**Gabritschevsky, E.** Farben polymorphismus und Vererbung mimetischer Varietäten der Fliege *Volucella bombylans* und anderer "hummelähnlicher" Zweiflügler. Zs. indukt. Abstammungslehre Berlin **32** 1924 pp. 321–353.
- 828.—**Gaede, M.** Alte und neue Arctiinae des Berliner Zoologischen Museums. Ent. Rdsch. Stuttgart **40** 1923 pp. 2–3, 7–8, 11–12, 14–15, 19–20, 23–24, 27–30. [Lep.]
- 829.—**Gaede, M.** *Coscinia striata* f. *aterrima* m. D. ent. Zs. Berlin **1923** p. 252. [Lep.]
- 830.—**Gahan, A. B.** On the identity of a European Chalcidoid parasite of the alfalfa leaf-weevil. J. Washington Acad. Sci. **13** 1923 pp. 408–411. [Hym.]
- 831.—**Gahan, A. B.** An Eulophid parasite of the chrysanthemum midge (Hymenoptera, Chalcidoidea). Proc. Ent. Soc. Washington **25** 1923 pp. 65–66.
- 832.—**Gahan, A. B.** The role of the taxonomist in present-day entomology. Proc. Ent. Soc. Washington **25** 1923 pp. 69–78.
- 833.—**Gahan, A. B.** Types of two Chalcid-flies misidentified. Proc. Ent. Soc. Washington D.C. **25** 1923 pp. 185–188. [Hym.]
- 834.—**Gahan, A. B. & Fagan, M. M.** The type species of the genera of Chalcidoidea or Chalcid-flies. U.S. Nat. Mus. Washington D.C. Bull. **124** 1923 173 pp. [Hym.]
- 835.—**Gajl, K. & Jaczewski, T.** *Arctocoris scotti* (Dgl. Sc.) from Poland (Heteroptera, Corixidae). [Also in Polish.] Rozpraw i Wiadomości z Muzeum im. Dzieduszyckich Lemberg **5–6** (1919–1920) 1922 pp. 142–150 4 figs.

836.—**Galli-Valerio**, B. Beobachtungen über Culiciden, nebst Bemerkungen über Tabaniden und Simuliden. Centralbl. Bakt. Jena 1 Abt. **90** 1923 pp. 38–40. [Dipt.]

837.—**Galvagni**, E. Eine neue Geometridenform. Verh. zool.-bot. Ges. Wien **67** 1917 p. (204). [Lep.]

838.—**Galvagni**, E. Einige Mitteilungen über neue Formen heimischer Microheteroceren. Verh. zool.-bot. Ges. Wien **70** 1920 pp. (53)–(55) 4 figs.

839.—**Galvagni**, E. Mitteilung über die Noctuide *Orrhodia vaccinii*, L. Verh. zool.-bot. Ges. Wien **70** 1920 pp. (84)–(85). [Lep.]

840.—**Galvagni**, E. Nachtrag zur Kenntnis der Schmetterlingsfauna Lus-sins. Verh. zool.-bot. Ges. Wien **72** (1922) 1923 pp. (84)–(89). [Lep.]

841.—**Garcia**, L. P. Las colecciones de Animales inferiores Moluscos y Artrópodos del Museo de Historia Natural del Instituto de Valencia. An. Inst. gen. tec. Valencia Trab. Lab. Hist. nat. no. 5 1920 120 pp. 7 pls. [Includes Insecta.]

842.—**Garrett**, F. C. & **Harrison**, J. W. H. Melanism in the Lepidoptera and its possible induction. Nature London **112** 1923 p. 240.

843.—**Garlick**, W. G. The feeding habits of Sawflies. Canad. Ent. Orillia **54** 1922 p. 240; **55** 1923 p. 256. [Hym.]

844.—**Garman**, P. Notes on the life history of *Clastoptera obtusa* and *Lepyronia quadrangularis* (Order Hemiptera, Family Cercopidae). Ann. Ent. Soc. Amer. Columbus Ohio **16** 1923 pp. 153–163 2 pls.

845.—**Garrett**, C. B. D. Two new Diptera in the Canadian National Collection, Ottawa. Canad. Ent. Orillia **55** 1923 p. 244.

846.—**Gatenby**, J. B. & **Cannon**, H. G. Spermatogenesis of the Lepidoptera. Nature **111** 1923 p. 568 & p. 670.

847.—**Gauthier**, H. Sur la présence d'*Ochthebius* (Col. Hydrophilidae) dans les salines du Chott el Djerid, en Tunisie. Bull. Soc. Hist. nat. Afr. N. Algiers **14** 1923 pp. 346–347.

848.—**Gautier**, C. Un Aleurode parasite du poirier et du frêne, *Tria-leurodes inaequalis*, n. sp. (Hem. Aleurodidae). Ann. Soc. ent. France Paris **91** 1923 pp. 337–350 1 pl.

849.—**Gautier**, C. & **Bonnamour**, S. Description d'*Apanteles clastratus*, nouvelle espèce élémentaire d'*A. conges-tus* Nees (Hym. Braconidae). Bull. Soc. ent. France Paris **1923** pp. 235–238

850.—**Gautier**, C., **Bonnamour**, S. & **Chifflet**, J. Observations biologiques sur *Tingis pyri* F., le Tigre du poirier. Ann. Soc. linn. Lyon **69** 1923 pp. 160–166. [Hem.]

**Gébert**, S. see MacGregor & Gébert.

851.—**Gebien**, H. Monographie der südamerikanischen Camarien (Coleopt. Heterom.) nebst einer Uebersicht über die indischen Gattungen der Camariinen. Arch. Natg. Berlin Abt. A **83** Heft 3 (1917) 1919 pp. 25–167 2 pls. 38 figs.

852.—**Gedoelst**, L. Note sur la larve du *Gasterophilus haemorrhoidalis* et description de la larve d'une nouvelle espèce africaine. Ann. Parasit. hum. & comp. Paris **1** 1923 pp. 269–275 2 figs. [Dipt.]

853.—**Gedoelst**, L. Les trois stades larvaires de *Cobboldia loxodontis*. Ann. Parasit. hum. & comp. Paris **1** 1923 pp. 354–362 2 figs. [Dipt.]

854.—**Gelpke**, H. Zur Lebensweise von *Anisopteryx aescularia* Schiff. Intern. ent. Zs. Guben **17** 1923 pp. 22–23. [Lep.]

855.—**Gerould**, J. H. Inheritance of white wing colour, a sex-limited (sex-controlled) variation in yellow Pierid butterflies. Genetics Menasha Wis. **8** 1923 pp. 495–551. [Lep.]

856.—**Gestro**, R. Nuovo Pausside delle Isole Filippine. Boll. Soc. ent. ital. Genoa **55** 1923 pp. 5–7. [Col.]

857.—**Gestro**, R. Cenni su alcuni *Pantorhytes* (Col.) con descrizione di una nuova specie. Boll. Soc. ent. ital. Genoa **55** 1923 pp. 61–64.

858.—**Giacomelli**, E. Sobre un caso di albinismo (?) en *Dione vanillae* L. (Nymphalidae). Physis Buenos Aires **5** 1921 pp. 64–66 2 figs. [Lep.]

859.—Giacomelli, E. Sobre el género *Dryocampa* Harris = *Anisota*, Huebn. Rev. chil. Hist. nat. Santiago **25** (1921) 1923 pp. 79–81. [Lep.]

860.—Gil, J. Estudio de un nuevo Jaquidromino de España. Bol. R. Soc. esp. Hist. nat. Madrid **23** 1923 pp. 150–154 figs. [Dipt.]

861.—Gill, C. A. The influence of humidity on the life history of mosquitoes and on their power to transmit infection. Trans. R. Soc. Trop. Med. & Hyg. London **14** 1921 pp. 77–87.

862.—Gillet, J. J. E. Description de Lamellicornes coprophages indo-malais. Ann. Soc. sci. Bruxelles **41** 1921 pp. 123–129. [Col.]

863.—Gillmer, M. Zusammenstellung einiger Mitteilungen zur Lebensgeschichte der *Plusia bractea* Fabr. Intern. ent. Zs. Guben **17** 1923 pp. 3–5. [Lep.]

864.—Gilmor, P. M. The poison and poison apparatus of the white-marked tussock moth *Hemerocampa leucostigma* Smith & Abbot. J. Parasitology Urbana Ill. **10** 1923 pp. 80–86 2 figs. 2 pls. [Lep.]

865.—Girault, A. A. New Encyrtidae from Australia. I. II. (Hymenoptera). Insec. Ins. Menst. Washington D.C. **11** 1923 pp. 47–50 & 141–148.

866.—Girault, A. A. Remarkable Chalcid-flies collected in Northern Australia by A. P. Dodd (Hymenoptera). Insec. Ins. Menst. Washington D.C. **11** 1923 pp. 96–100.

867.—Glais, R. & Le Pontois, A. Observations sur *Agrotis graslini* Ramb. (Lep. Noctuidae) et description d'une forme rencontrée en Morbihan, *A. graslini* var. *joannisi* Gl. et Le P. Bull. Soc. ent. France Paris 1923 pp. 69–73.

868.—Glenn, P. A. «A problem in the relation of temperature to rate of Insect development. Kansas Univ. Sci. Bull. Lawrence **14** 1922 pp. 317–323 1 graph.

869.—Goetghebuer, M. Note à propos des espèces du groupe *lateralis* du genre *Tipula*. Bull. Soc. ent. Belg. Brussels **5** 1923 p. 119. [Dipt.]

870.—Goetghebuer, M. Etude critique des Chironomides de la collection Meigen. Bull. Soc. ent. Belg. Brussels **5** 1923 pp. 120–129. [Dipt.]

871.—Goetghebuer, M. Nouveaux matériaux pour l'étude de la faune des Chironomides de Belgique. Ann. Biol. lacustre Brussels **12** 1923 pp. 103–120 11 figs. [Dipt.]

871a.—Goetsch, W. Die Abhängigkeit sozialer Insekten vom Nest. Die Naturwissenschaften Berlin **12** 1924 p. 88.

872.—Goldschmidt, R. Kleine Beobachtungen und Ideen zur Zellenlehre IV. Die Sammelchromosomen der Schmetterlinge. Arch. Zellforsch. Leipzig **17** 1923 pp. 167–184 33 figs. [Lep.]

873.—Goldschmidt, R. Ein weiterer Beitrag zur Kenntnis des Gynandromorphismus. Biol. Zentralbl. Leipzig **43** 1923 pp. 518–528 figs.

874.—Goldschmidt, R. Einige Materialien zur Theorie der abgestimmten Reaktionsgeschwindigkeit. Arch. mikr. Anat. **98** 1923 pp. 292–313 figs. [Lep.]

875.—Goldschmidt, R. Untersuchungen über Intersexualität III. Zs. indukt. Abstammlungslehre Berlin **31** 1923 pp. 100–133.

876.—Goldschmidt, R. & Pariser, K. Triploide Intersexe bei Schmetterlingen. Biol. Zentralbl. Leipzig **43** 1923 pp. 446–452. [Lep.]

Gonzalez, B. M. see Pearl, Parker & Gonzalez.

877.—Goudie, J. C. Notes on the Coleoptera of North-Western Victoria. Part VIII. Vict. Nat. Melbourne **37** 1920 pp. 28–34, Part IX **40** 1923 pp. 21–24.

878.—Gowdey, C. C. The White Flies (Aleyrodidae) of Jamaica. Jamaica Dept. Agric. Kingston Ent. Bull. no. **3** 1923 6 pp. [Hom.]

879.—Grabe, A. Grossschmetterlingsfauna des mittleren Ruhrkohlengebietes. Intern. ent. Zs. Guben **16** 1923 pp. 169–171, 185–187, 201–202; **17** pp. 1–3, 17–19, 33–34, 49–52. [Lep.]

880.—Graeffe, E. Beiträge zur Fauna der Braconiden oder Ichneumones Adsciti des österr. Küstenlandes und südlichen Krains. Boll. Soc. Adriat. Sci. nat. Trieste **24** 1908 pp. 157–158. [Hym.]

881.—Graeffe, E. Ubersicht der Hymenoptera des Küstenlandes. Boll. Soc. Adriat. Sci. nat. Trieste **25** 1911 pp. 41–53, 54–58, 59–62.

882.—Graeffe, E. Beiträge zur Fauna der "Hemipteren" des Küstenlandes. Boll. Soc. Adriat. Sci. nat. Trieste **25** 1911 pp. 291–309.

883.—Grandi, G. Imenotteri dei fichi dell'fauna olartica e indo-malese. Ann. Mus. civico Storia nat. Genoa **51** 1923 pp. 101–108. [Hym.]

884.—Grandi, G. Studi sullo sviluppo postembrionale delle varie razze del *Bombyx mori* L. II. L'evoluzione larvale della razza Treotti dello Schensi e considerazioni generali. Boll. Lab. Zool. gen. & agrar. R. Scuola sup. Agric. Portici **17** 1923 pp. 3–40 9 figs. [Lep.]

885.—Grandori, R. Studi sulla flaccidezza del bombice del gelso. (Nota preliminare). Boll. Soc. zool. ital. Rome Ser. IV **1** (1919) 1920 pp. 17–28. [Lep.]

886.—Grassé, P. P. Etude biologique sur le Criquet égyptien, *Orthacanthacris aegyptia* (L.). Trav. Inst. Zool. Univ. Montpellier Cette (2) no. 32 [34] 1923 pp. 545–578 7 figs.

887.—Grassé, P. P. Note sur quelques Orthoptères et Dermaptères français, I. Bull. Soc. ent. France Paris 1923 pp. 81–84.

888.—Grassé, P. P. Sur le phototropisme de quelques criquets. C.R. Soc. Biol. Paris **89** 1923 pp. 898–900 1 fig. [Orth.]

889.—Grassi, B. Nuovi contributi alla biologia degli anofeli. Atti R. Accad. Naz. Lincei Rend. Classe Sci. fis. mat. e nat. **32** sem. 1 1923 pp. 373–375, 438–442. [Dipt.]

890.—Graves, P. P. Two new Lycaenid subspecies from the Lebanon. Entomologist London **56** 1923 pp. 154–157. [Lep.]

891.—Graves, P. P. Notes on the Lepidoptera of the Constantinople district (Asia) and Brusa. Ent. Rec. London **35** 1923 pp. 95–96.

892.—Green, E. E. On the type of *Monophlebus (Drosicha) contrahens* (Walk.), with description of a new species from Ceylon. Ann. Mag. Nat. Hist. London (9) **12** 1923 pp. 168–170 2 pls. [Hom.]

893.—Green, E. E. Note on *Gossyparia mannifera* Hardw. Ann. Mag. Nat. Hist. London (9) **12** 1923 pp. 697–698. [Hom.]

894.—Green, E. E. Observations on British Coccidae.—VIII. Ent. Mo. Mag. London **59** 1923 pp. 211–218 4 figs. [Hom.]

895.—Green, E. E. A brief review of the indigenous Coccidae of the British Islands. Proc. S. London Ent. & Nat. Hist. Soc. London **1922–23** 1923 pp. 12–25 4 pls. [Hom.]

896.—Green, E. E. On a small collection of Coccidae from Mesopotamia, with description of a new species. Bull. Ent. Res. London **13** 1923 pp. 469–470 1 fig. [Hom.]

897.—Green, E. E. Observations on the Coccidae of the Madeira Islands. Bull. Ent. Res. London **14** 1923 pp. 87–97 8 figs. [Hom.]

898.—Green, E. E. On a new species of *Coccomytilus* from Egypt. Egypt Minist. Agric. Tech. & Sci. Serv. Bull. **36** Cairo 1923 p. 63 1 pl. [Hom.]

899.—Green, E. E. & Laing, F. Descriptions of some new species and some new records of Coccidae I. Diaspidinae. Bull. Ent. Res. London **14** 1923 pp. 123–131 11 figs. [Hom.]

900.—Greene, C. T. The immature stages of *Hydroporus agalma* Wheeler (Diptera). Proc. Ent. Soc. Washington **25** 1923 pp. 66–69 1 pl.

901.—Greene, C. T. A contribution to the biology of N. A. Diptera. Proc. Ent. Soc. Washington **25** 1923 pp. 82–87 2 pls.

902.—Greene, C. T. The larva and pupa of *Microdon megalogaster*, Snow (Diptera). Proc. Ent. Soc. Washington **25** 1923 pp. 140–141 1 fig.

903.—Greene, C. T. A new species of *Volucella* (Diptera). Proc. Ent. Soc. Washington 25 1923 pp. 165–168 1 pl.

904.—Greschik, J. A leveldarázslárvák középbelének hámja; a mag szerepe a hólyagalakú secretióban. [Das Mitteldarmepithel der Tenthrediniden-Larven; die Beteiligung des Kerns an der blasenförmigen Sekretion.] Allatt. Közlem. Budapest 14 1915 pp. 207–225 (German summary p. 274). [Hym.]

905.—Gribodo, G. Hymenoptera Aculeata. Missione zoologica de Dott. E. Festa in Cirenaica. Boll. Mus. Zool. & Anat. comp. Torino 36 1921 no. 741 7 pp.

906.—Gridelli, E. Studi sul genere *Quedius* Steph. (Coleopt. Staphyl.). Atti Acc. ven.-trent. Padua 12–13 1922 pp. 123–140.

907.—Gridelli, E. Quarto contributo alla conoscenza delle specie palearctiche del genere *Philonthus* Steph. (Col.). Boll. Soc. ent. ital. Genoa 55 1923 pp. 23–38.

908.—Gridelli, E. Note su alcune specie di *Philonthus* Steph. e *Gabrius* Steph. (5° Contributo). Boll. Soc. ent. ital. Genoa 55 1923 pp. 126–127. [Col.]

909.—Griffini, A. Nota sull' *Homederus gladiator* Jakowl. Boll. Mus. Zool. & Anat. comp. Torino 35 no. 733 1920 pp. 1–7 1 fig. [Col.]

910.—Grönblom, T. *Xanthia citrago* L. ab. *fasciata* n. ab. (Lep., Noctuidae). Notulae Ent. Helsingfors 3 1923 p. 10 5 figs.

911.—Gros, A. Études sur les premiers stades des Ephémères du Jura français. Ann. Biol. lacustre Brussels 12 1923 pp. 49–74 12 figs. [Ephem.]

912.—Gros, M. A. Note sur la reproduction des Ephémères. Ann. Sci. nat. (Zool.) Paris (10) 6 1923 pp. 411–413.

913.—Grosvenor, T. H. L. Notes on the genus *Zygaena*. Proc. S. London Ent. & Nat. Hist. Soc. 1922–23 1923 pp. 64–72. [Lep.]

914.—Grouvelle, A. Clavicernes africains du Musée d'Histoire Naturelle de Luxembourg récoltés par M. Ed. Luja de Luxembourg. Ges. Luxemb.

Naturfreunde Festschrift zur Feier des 25-jährigen Bestehens 1890–1915 1915 pp. 105–123. [Col.]

915.—Grouvelle, A. Voyage de Ch. Alluaud et R. Jeannel en Afrique Orientale (1911–1912), xvii. Clavicernes. Paris 1923 pp. 243–274 1 photo. [Col.]

916.—Grusz, F. A lepkék illatszervei. Allat. Közlem. Budapest 11 1912 pp. 26–67 figs. [Lep.]

917.—Grusz, F. Note on the secretions of the digestive glands in *Phthisus pubis* L. and their biological functions. Parasitology Cambridge 15 1923 pp. 203–204. [Anoplura.]

918.—Gschwandner, R. & Rebel, H. Hybriden und Aberrationen bei *Saturnia*-Arten. Verh. zool.-bot. Ges. Wien 69 1919 pp. (57)–(72). [Lep.]

919.—Gschwendtner, L. Einiges über Ostturkestan und dessen Dytischen-Fauna. Arch. Natg. Berlin Abt. A 89 Heft 8 1923 pp. 93–111. [Col.]

920.—Guelf, J. Praktische Winke über das Fangen und Präparieren der Mikrolepidopteren. Ges. Luxemb. Naturfreunde Festschrift zur Feier des 25-jährigen Bestehens 1890–1915 1915 pp. 261–265.

921.—Guérin, J. & Péneau, J. Faune entomologique armoricaine; Hémiptères. Premier volume. Hétéroptères. Trav. sci. Univ. Rennes 13 1915 pp. 201–301 numerous figs.

922.—Gulde, J. Die Wanzen (Hemiptera-Heteroptera) der Umgebung von Frankfurt a. M. und des Mainzer Beckens. Abh. Senckenberg. natf. Ges. Frankfurt o. M. 37 1921 pp. 329–503 7 text-figs.

923.—Gundermann, E. Verzeichnis Thüringer Dipteren. Intern. ent. Zs. Guben 17 1923 pp. 65–68, 73–76, 81–84.

924.—Gutherz, S. Beobachtungen und Versuche zur Fortpflanzung von *Pyrrhocoris apterus* L. SitzBer. Ges. natf. Freunde Berlin 1921 pp. 47–51. [Hem.]

925.—Guyénot, E. Recherches sur un cas d'hérédité "sex-linked," la Drosophile à œil "barred." Mém. Soc. Phys. Genève 39 1923 pp. 261–272. [Dipt.]

926.—**Györfy.** Beiträge zur Kenntnis der palearktischen Apionen. Rovart. L. Budapest **26** 1923 pp. 88–95. [Col.]

927.—**Habermehl, H.** Neue und wenig bekannte paläarktische Ichneumoniden (Hym.). D. ent. Zs. Berlin **1923** pp. 374–387.

928.—**Habermehl, H.** Zur Deutung des *Cryptus signatorius* F. ♀ (Hym.). D. ent. Zs. Berlin **1923** pp. 603–604.

929.—**Hackman, L. M.** Studies on *Cicadella hieroglyphica* Say (Homoptera, Cicadellidae). Kansas Univ. Sci. Bull. Lawrence **14** 1922 pp. 189–209 5 pls.

930.—**Hale, H. M.** Studies in Australian aquatic Hemiptera no. II. Rec. S. Aust. Mus. Adelaide **2** 1923 pp. 397–424 2 pls. [Hom.]

931.—**Hall, W. J.** Further observations on the Coccidae of Egypt. Egypt Minist. Agric. Tech. & Sci. Serv. Bull. **36** Cairo 1923 pp. 1–61 12 pls. [Hom.]

932.—**Hallett, H. M.** Parasitic wasps and bees. Ann. Rep. & Proc. Lancs. & Ches. Ent. Soc. Liverpool **45** & **46** 1923 pp. 18–23. [Hym.]

933.—**Hamilton, W. F.** A direct method of testing color vision in lower animals. Proc. Nat. Acad. Sci. Washington **8** 1922 pp. 350–353. [Dipt.]

934.—**Hamm, A. H.** Notes on the life-history of a Bethylid (Hymenoptera) of the genus *Cephalonomia* Westw., observed at Oxford. Trans. Ent. Soc. Lond. **1922** 1923 pp. xxvi–xxxii.

935.—**Hancock, G. L. R.** On some hibernating Ichneumonidae from the Cambridgeshire Fens. Ent. Mo. Mag. London **59** 1923 pp. 152–158. [Hym.]

936.—**Hancock, G. L. R.** Contributions towards a list of the Insect Fauna of the South Ebudes II. The Lepidoptera. Scot. Nat. Edinburgh **1923** pp. 125–132.

937.—**Handlirsch, A.** Fossile Ephemerenlarven aus dem Buntsandstein der Vogesen. Verh. zool.-bot. Ges. Wien **68** 1918 pp. (112)–(114) 1 fig.

938.—**Hanitsch, R.** On a collection of Blattidae from the Buitenzorg Museum. Treubia Buitenzorg **3** 1923 pp. 197–221 8 figs. [Orth.]

939.—**Hanitsch, R.** Malayan Blattidae. Part II. J. Malayan Br. R. Asiat. Soc. **1** 1923 pp. 393–474 2 pls. [Orth.]

940.—**Hansen, V.** Nye og sjældne danske Biller. [Coleoptera new to the Danish fauna or rare in Denmark.] Ent. Medd. Copenhagen **14** 1922 pp. 23–24; **14** 1923 pp. 129–130. [Danish.]

941.—**Hanus, F.** Nova dorma Streliká z Bulharska. *Promorphocarabus monilis* var. *buresi* m. Časopis Českoslov. Společ. ent. Prague **20** 1923 p. 11 fig. [Col.]

942.—**Hardy, G. H.** Notes on the distribution of some West Australian Asilidae. Ann. Mag. Nat. Hist. (9) **12** 1923 pp. 174–176. [Dipt.]

**Hardy, G. H.** see Johnston & Hardy.

943.—**Hargitt, Ch. W.** The digestive system of the Periodical Cicada. ii. Physiology of the adult Insect. Biol. Bull. Wood's Hole Mass. **45** 1923 pp. 200–212. [Hom.]

944.—**Harnisch, O.** Metamorphose und System der Gattung *Cryptochironomus* K. s. l. Zool. Jahrb. Jena Abt. f. System. **47** 1923 pp. 271–307 13 figs. [Dipt.]

945.—**Harris, R. G.** Sur la culture des larves de Cécidomyies paedogenétiques (*Miastor*) en milieu artificiel. C.R. Soc. Biol. Paris **88** 1923 pp. 256–258. [Dipt.]

946.—**Harris, R. G.** Occurrence, life-cycle and maintenance, under artificial conditions of *Miastor*. Psyche Boston Mass. **30** 1923 pp. 95–101. [Dipt.]

**Harrison, J. W. H.** see Carter & Harrison; also Garrett & Harrison.

947.—**Hartzell, A.** The genus *Empoasca* in North America. Proc. Iowa Acad. Sci. Des Moines **30** 1923 pp. 87–133 4 pls. [Hom.]

948.—**Hässlein, —.** Einiges über *Mel. aurinia*-Zucht. Ent. Zs. Frankfurt o. M. **36** 1923 pp. 67–68. [Lep.]

949.—**Hauder, F.** Beschreibung der Raupe und Puppe von *Lithocolletis hauderella* Rbl. Verh. zool.-bot. Ges. Wien **64** 1914 pp. (153)–(154). [Lep.]

- 950.—**Hauder, F. & Rebel, H.** Beschreibungen dreier neuen Gelechiiden. Verh. zool.-bot. Ges. Wien **67** 1917 pp. (29)–(35) 2 figs. [Lep.]
- 951.—**Haupt, H.** Die Homoptera der Tibetreise W. Stötzners. D. ent. Zs. Berlin **1923** pp. 295–306 3 figs.
- 952.—**Hauser, G.** Neue *Apotomopterus*-Arten. Soc. ent. Stuttgart **39** 1924 pp. 1–2, 6–7. [Col.]
- 953.—**Haviland, M. D.** On the bionomics and postembryonic development of certain Cynipid hyperparasites of Aphides. Q. J. Microsc. Sci. London N. S. **65** 1921 pp. 451–478 11 text-figs. [Hym.]
- 954.—**Hawkes, O. A. M.** Hibernation of Coccinellidae on mountains. Ent. Mo. Mag. London **59** 1923 pp. 53–56. [Col.]
- 955.—**Hearle, E.** Notes on mosquitos from British Columbia (Culicidae, Diptera). Canad. Ent. Orillia **55** 1923 pp. 4–5, 265–266.
- 956.—**Hebard, M.** Studies in Malayan, Melanesian and Australian Tettigoniidae. Proc. Acad. Nat. Sci. Philadelphia **74** 1922 pp. 121–299 22 pls. [Orth.]
- 957.—**Hebard, M.** The Philippine genus *Misythus* (Orthoptera, Acrididae, Aerydiinae). Proc. Acad. Nat. Sci. Philadelphia **75** 1923 pp. 323–357 5 pls.
- 958.—**Hebard, M.** An interesting new species of the genus *Melanoplus* from central Georgia (Orthoptera, Acrididae). Ent. News Philadelphia **34** 1923 pp. 260–262 2 figs.
- 959.—**Hebard, M.** Studies in the Dermaptera and Orthoptera of Colombia. Third paper. Orthopterous family Acrididae. Trans. Amer. Ent. Soc. Philadelphia **49** 1923 pp. 165–313 8 pls.
- 960.—**Hebard, M.** Expedition of the California Academy of Sciences to the Gulf of California in 1921. The Dermaptera and Orthoptera. Proc. Cal. Acad. Sci. San Francisco 4th Ser. **12** 1923 pp. 319–340 13 figs.
- 961.—**Hebard, M.** Insects, Arachnids, and Chilopods of the Pribilof Islands, Alaska: Orthoptera. North Amer. Fauna Washington D.C. no. **46** 1923 p. 140.
- 962.—**Hebard, M.** Studies in Indian Dermaptera. Mem. Dept. Agr. India. Calcutta Ent. Ser. **7** 1923 pp. 195–242 3 pls. [Orth.]
- 963.—**Hechler, K.** Ein seltener *Gonopteryx rhamni*. Ent. Zs. Frankfurt o. M. **37** 1923 p. 40. [Lep.]
- 964.—**Hedicke, H.** Nomina nova ii–iv. D. ent. Zs. Berlin **1923** pp. 72, 226, 431. [Col.]
- 965.—**Hedicke, H.** Die systematische Stellung des Genus *Harmolita* Motschulsky 1863 (Hym. Chalc.). D. ent. Zs. Berlin **1923** pp. 616–618.
- 966.—**Hedicke, H.** Beiträge zur Kenntnis der Cynipiden (Hym.). XII. Zs. Pflanzenkr. u. Gallenkunde Stuttgart **33** 1923 pp. 81–83.
- 967.—**Hedicke, H.** Zur Kenntnis der Cynipiden der Fritfliege. Zs. Schädlingsbekämpfung Berlin **1** 1923 pp. 38–40. [Hym.]
- 968.—**Heikertinger, F.** Die Wespenmimikry der Lepidopteren. Verh. zool.-bot. Ges. Wien **68** 1918 pp. (164)–(194).
- 969.—**Heikertinger, F.** Die Wespenmimikry oder Spheköidie. Verh. zool.-bot. Ges. Wien **70** 1920 pp. 316–385. [Hym.]
- 970.—**Heikertinger, F.** Zur Kenntnis der Halticinengattung *Crepidodera* (Col. Chrysomel.) I–III. Wiener ent. Ztg. **40** 1923 pp. 121–123 & 129–140.
- 971.—**Heikertinger, F.** Zur metöken Myrmekoidie. Zs. wiss. Insektenbiol. Berlin **18** 1923 pp. 163–178.
- 972.—**Heikertinger, F.** Ein neues System der Varietätenbezeichnung: Das freie Attribut. Ent. Blätter Berlin **19** 1923 pp. 18–29, 80–86.
- 973.—**Heikertinger, F.** Versuche und Freilandforschungen zur Mimikryhypothese. II. Myrmekomimetische Anthiciden. Biolog. Zentralbl. Leipzig **43** 1923 pp. 489–493. [Col.]
- 974.—**Heinrich, C.** New Olethreutidae from eastern United States (Lepidoptera). Proc. Ent. Soc. Washington D.C. **25** 1923 pp. 105–122.

975.—Heinrich, C. Revision of the North American moths of the subfamily Eucosminae of the family Olethreutidae. U. S. Nat. Mus. Washington D.C. Bull. **123** 1923 298 pp. 59 pls. [Lep.]

976.—Heinrich, C. On the synonymy of the pea moth. Canad. Ent. Orillia **55** 1923 p. 13. [Lep.]

977.—Heinrich, R. Beitrag zur Makrolepidopteren fauna von Digne (Basses Alpes). Beiheft D. ent. Zs. Berlin 1923 pp. 1–124.

978.—Hellén, W. Koleopterologische Mitteilungen aus Finnland IV. Notulae Ent. Helsingfors **3** 1923 pp. 13–17.

979.—Hellén, W. De nordiska arterna av släktet *Dryops* Oliv. (Col.). Notulae Ent. Helsingfors **3** 1923 pp. 84–86 6 figs.

980.—Hellén, W. Ueber *Epyris bilineata* Thoms. (Hym.). Notulae Ent. Helsingfors **3** 1923 pp. 115–116.

981.—Heller, K. M. Beitrag zur Kenntnis der Erotyliden der indo-australischen Region mit besonderer Berücksichtigung der philippinischen Arten. Arch. Nat. Abt. A **84** Heft 8 (1918) 1920 pp. 1–121 figs. pls. [Col.]

982.—Heller, K. M. Über bekannte und neue *Camarotus*-Arten (Coleopt. Curcul.). D. ent. Zs. Berlin **1923** pp. 61–67.

983.—Heller, K. M. Neue Bockkäfer von den Philippinen und aus Borneo. D. ent. Zs. Berlin **1923** pp. 414–425 6 figs. [Col.]

984.—Heller, K. M. Neue philippinische Käfer (xxvii Beitrag). Stettin. ent. Ztg. **84** 1923 pp. 1–24. [Col.]

985.—Heller, K. M. Die Nitiduliden-Gattung *Megauchenia* M'Leay (Col.). Ent. Blätter Berlin **19** 1923 pp. 40–43.

986.—Heller, K. M. Die Coleopteren-ausbeute der Stötznerschen Sze-Tschwan-Expedition 1913–1915. Ent. Blätter Berlin **19** 1923 pp. 61–79 3 figs.

987.—Heller, K. M. Philippinische *Agelasta*- und *Choeromorpha*-Arten (Col. Cerambyc.). Ent. Mitt. Berlin **12** 1923 pp. 206–210.

988.—Heller, K. M. 1. Bestimmungsschlüssel aussereuropäischer Käfer. Curculionidae: Genus *Eupholus* Guér. Koleopt. Rundsch. Vienna **10** 1923 pp. 146–154. [Col.]

989.—Heller, K. M. 2. Bestimmungsschlüssel aussereuropäischer Käfer. Curculionidae, Tribus Calandrinii, Gattung *Cyrtotrachelus* Schönh. Wiener ent. Ztg. **40** 1923 pp. 149–156. [Col.]

990.—Heller, K. M. Neue malayische, meist philippinische Bockkäfer und ein neuer Rüsselkäfer. Tijdschr. Ent. The Hague **66** 1923 pp. 33–48 I plate. [Col.]

991.—Heller, K. M. Ein neuer Cryptophagine (Coleopt.) aus Java. Treubia Buitenzorg **3** 1923 pp. 275–276.

992.—Heller, K. M. Some new Malayan Carabidae, especially Philippine. Phil. J. Sci. Manila **13** 1923 pp. 295–307 1 pl. [Col.]

993.—Hempel, A. Hemipteros novos ou pouco conhecidos da familia Aleyrodidae. Rev. Mus. São Paulo **13** 1923 pp. 1119–1191 2 pls.

994.—Hendel, F. Die paläarktischen Agromyziden (Prodromus einer Monographie). Arch. Nat. Abt. A **84** Heft 7 (1918) 1920 pp. 109–174 pl. [Dipt.]

995.—Hendel, F. Neue *Cestrotus*-Arten des ungarischen Nationalmuseums (Dipt. Lauxaniid.). Verh. zool.-bot. Ges. Wien **70** 1920 pp. 74–80.

996.—Hendel, F. Afrikanische Diopsiden (Dipt.). Wiener ent. Ztg. **40** 1923 pp. 33–42.

997.—Hendel, F. Blattminierende Fliegen. (4. Beitrag zur Blattminenkunde Europas). D. ent. Zs. Berlin **1923** pp. 386–400. [Dipt.]

998.—Henriksen, K. L. A new Tertiary dragon-fly *Oplonaeschna staurophebioides* n. sp. from Denmark. Medd. Geol. Copenhagen **6** no. 9 1922 pp. 1–5. [Odon.]

999.—Henriksen, K. L. Oversigt over Dansk Entomologisk Historie. Ent. Medd. Copenhagen **15** 1921–1923 144 pp. 32 figs.

1000.—Henriksen, K. L. *Mamestra dentina* ♂ and *Agrotis exclamationis* ♀ in copula. Ent. Medd. Copenhagen **14** 1923 pp. 125–127. [Danish.]

1001.—Henirot, P. Le genre *Hesperia* F. (= *Syrrichthus* B.) dans le Sud-Ouest. Proc.-verb. Soc. linn. Bordeaux **73** 1921 pp. 119–122. [Lep.]

1002.—Henry, G. M. Notes on a few aberrations of Ceylon butterflies. Spolia Zeylanica Colombo **12** 1923 pp. 315–317 2 pls. [Lep.]

1003.—Herbst, P. *Tetralonia chilensis* P. Herbst ♀ ♂ (Apidae, Hymenoptera). Rev. chil. Hist. nat. Santiago **21** 1917 pp. 183–191.

1004.—Herbst, P. Nuevos Pompilidos chilenos. (Pompilidae, Hymenoptera). Rev. chil. Hist. nat. Santiago **25** (1921) 1923 pp. 148–151 1 fig.

1005.—Herbst, P. Beiträge zur Biologie der chilenischen Arten der Gattung *Centris* F. (Apidae). Zs. wiss. Insektenbiol. Berlin **18** 1923 pp. 345–350.

1006.—Hering, M. Minenstudien, III. D. ent. Zs. Berlin 1923 pp. 188–206 12 figs.

1007.—Hering, M. Neue Cossiden und Castniiden. D. ent. Zs. Iris Dresden **37** 1923 pp. 11–19. [Lep.]

1008.—Hering, M. Durch Insektenlarven erzeugte Blattminen. Biol. Tiere Deutschlands Berlin 1923 Teil **43** 17 pp. 18 figs.

1009.—Herter, K. Untersuchungen über den Temperatursinn der Feuerwanze (*Pyrhocoris apterus* L.). Biol. Zentralbl. Leipzig **43** 1923 pp. 27–30. [Hem.]

1010.—Herter, K. Untersuchungen über den Temperatursinn der Hausgrille (*Acheta domesticus* L.) und der roten Waldameise (*Formica rufa* L.). Biol. Zentralbl. Leipzig **43** 1923 pp. 282–286 figs.

1011.—Hertig, M. The normal and pathological histology of the ventriculus of the honey-bee, with special reference to infection with *Nosema apis*. J. Parasit. Urbana Ill. **9** 1923 pp. 109–140 3 pls. [Hym.]

1012.—Hervé-Bazin, J. Notes synonymiques sur quelques *Lathyrophthalmus* (Diptera, Syrphidae). Bull. Mus. Hist. nat. Paris 1923 pp. 173–174.

1013.—Hervé-Bazin, J. Première note sur les Syrphides (Diptera) de la Collection du Muséum National de Paris. Bull. Mus. Hist. nat. Paris 1923 pp. 252–259, 318–319 2 figs.

1014.—Hervé-Bazin, J. Etudes sur les *Lathyrophthalmus* (Diptera, Syrphidae) d'Extrême-Orient. Ann. Sci. nat. (Zool.) Paris (10) **6** 1923 pp. 125–152 25 figs.

1015.—Hervé-Bazin, J. Diagnoses de Syrphides (Dipt.) nouveaux du Laos (Indo-Chine française). Bull. Soc. ent. France Paris 1923 pp. 25–28.

1016.—Hervé-Bazin, J. Remarque sur l'ouvrage de M. Th. Becker: "Neue Dipteren meiner Sammlung, Part 1, Syrphidae," paru dans Mitt. zool. Mus. Berlin x (1921) pp. 1–93. Bull. Soc. ent. France Paris 1923 pp. 129–131.

1017.—Hervey, G. E. R. The abdomen and genitalia of *Philaenus lineatus* Linn. Proc. Acadian Ent. Soc. Fredericton N.B. **8** (1922) 1923 pp. 153–155 2 pls. [Hom.]

1018.—Hesse, E. Zur Entwicklung einer *Raphidia*-Larve. Zs. wiss. Insektenbiol. Berlin **18** 1923 p. 301. [Neur.]

1019.—Hesse, E. Zur Entwicklung von *Tinea lapella* Hb. Zs. wiss. Insektenbiol. Berlin **18** 1923 p. 301. [Lep.]

1020.—Hickernell, L. M. The digestive system of the Periodical Cicada, *Tibicen septendecim* Linn. III. Morphology of the system in the nymph. Biol. Bull. Woods Hole Mass. **45** 1923 pp. 213–221 4 pls. [Hom.]

1021.—Hill, C. A. A new species and a new variety of Noctuid moths from Southern California. Bull. S. Cal. Acad. Sci. Los Angeles **22** 1923 pp. 17–18 1 pl. [Lep.]

Hill, C. C. see Leiby & Hill.

1022.—Hill, G. F. New termites from Central and South-East Australia. Proc. Linn. Soc. N.S.W. Sydney **48** 1923 pp. 40–48 21 figs. [Isopt.]

1023.—Hill, G. F. A new Australian *Phlebotomus* (Dipt., Psychodidae). Bull. Ent. Res. London **14** 1923 pp. 83–86 6 figs.

1024.—Hill, J. Notes on the migratory locust and the invasion of 1886. Vict. Nat. Melbourne **38** 1921 pp. 40–43. [Orth.]

1025.—Hine, J. S. Notes on robberflies from south-west Texas, collected by the Bryant Walker Expedition, with a description of a new species of *Erax*. Occ. Paprs. Mus. Zool. Univ. Michigan Ann Arbor no. **61** 1918 7 pp.

1026.—Hine, J. S. Alaskan species of Diptera of the genus *Helophilus*, with notes on others. Ohio J. Sci. Columbus **23** 1923 pp. 192–200.

1027.—Hine, J. S. Some notes on American Tabanidae with description of a new species from Africa. Ohio J. Sci. Columbus **23** 1923 pp. 204–206. [Dipt.]

1028.—Hine, J. S. Horseflies collected by Dr. J. M. Aldrich in Alaska in 1921. Canad. Ent. Orillia **55** 1923 pp. 143–146. [Dipt.]

1029.—Hingston, R. W. G. The red ant. J. Bombay Nat. Hist. Soc. **29** 1923 pp. 362–372 2 pls. 1 fig., pp. 681–693. [Continuing.] [Hym.]

1030.—Hintz, E. Die Cerambyciden-gattung *Ceroplesia* Serv. Arch. Natg. Berlin **84** Abt. A Heft 10 (1918) 1920 pp. 162–176. [Col.]

1031.—Hirschke, H. [Aberrations of *Coenonympha* and *Larentia* spp.] Verh. zool.-bot. Ges. Wien **67** 1917 pp. (16)–(17). [Lep.]

1032.—Höfer, K. Mitteilungen über heimische *Lobophora*-Arten. Verh. zool.-bot. Ges. Wien **70** 1920 pp. (5)–(10) 4 figs. [Lep.]

1033.—Höfer, K. Der heimische Formenkreis. Verh. zool.-bot. Ges. Wien **70** 1920 pp. (19)–(24) 9 figs. [Lep.]

1034.—Höfer, K., Jr. Besprechung einiger aberranter Falter. Verh. zool.-bot. Ges. Wien **68** 1918 pp. (155)–(156) 3 figs. [Lep.]

1035.—Höfer, K., Jr. Falter aus Niederösterreich. Verh. zool.-bot. Ges. Wien **70** 1920 pp. (173)–(174). [Lep.]

(N-12519 j) Q

1036.—Hoffman, W. H. Observations on the occurrence and biology of *Triatoma flavida* in Cuba (Heterop., Reduviidae). Ent. News Philadelphia **34** 1923 pp. 111–113.

1037.—Höhne, W. Neue Dynastiden (Col.). D. ent. Zs. Berlin **1923** pp. 252–255.

1038.—Höhne, W. Neue Cyclocephalen (Col. Dyn.). D. ent. Zs. Berlin **1923** pp. 345–373.

1039.—Holdhaus, C. Elenco dei coleotteri dell'isola d'Elba, con studii sul problema della Tirennide. Mem. Soc. ent. ital. Genoa **2** 1923 pp. 77–176 7 figs. [Col.]

1040.—Holdhaus, K. Eine neue *Chrysomela* aus den Ostalpen. Verh. zool.-bot. Ges. Wien **64** 1914 pp. (126)–(127). [Col.]

1041.—Hollande, C. La cellule péricardiale des Insectes (cytologie, histochimie, rôle physiologique). Arch. Anat. microsc. Paris **18** 1921 pp. 85–307 4 pls. 31 figs.

1042.—Hollande, A. Ch. L'origine et la nature des cristaux des cellules caliciformes de l'intestin moyen de la chenille tordeuse du chêne (*Tortrix viridana* L.); fonction d'arrêt de ces cellules. Arch. Anat. microsc. Paris **19** 1923 pp. 349–369 figs. [Lep.]

1043.—Holste, G. Das Gehirn von *Dytiscus marginalis* L. Zs. wiss. Zool. Leipzig **120** 1923 pp. 251–280 figs. [Col.]

1044.—Hommel, H. Neue Formen von *Colias palaeno* L. var. *europome* Esp. aus dem südlichen Schwarzwald. Mitt. Badischen Ent. Ver. Freiburg i. Br. **1** 1923 p. 13. [Lep.]

1045.—Hopp, W. Eine Heterogynide in Südafrika (Lep.). D. ent. Zs. Berlin **1923** pp. 244–245 [repeated on pp. 334–335].

1046.—Hori, H. On a new variety of *Polyommatus baeticus* L. in Japan. Insect World Gifu **27** 1923 pp. 233–234. [Lep.]

1047.—Hormuzaki, K. F. v. Nachträge und Berichtigungen zur Makrolepidopterenfauna der Bukowina. Verh. zool.-bot. Ges. Wien **66** 1916 pp. 401–417.

- 1048.—**Horn**, W. Zur Systematik, Geographie und Lebenweise der Cicindelinae (Col.). Zool. Jahrb. Jena Abt. f. System. **47** 1923 pp. 309–330 4 figs.
- 1049.—**Horn**, W. Drei neue tropische Cicindeliden-Rassen. Ent. Blätter Berlin **19** 1923 pp. 29–31. [Col.]
- 1050.—**Horn**, W. Ueber eine bisher nicht erkannte geographische Cicindelidae-Rasse von Nordafrika (Col.). Ent. Mitt. Berlin **12** 1923 pp. 204–205.
- 1051.—**Horn**, W. Einiges über neue und alte Cicindeliden (Col.). Ent. Medd. Copenhagen **14** 1923 pp. 211–216.
- 1052.—**Horn**, W. Philippine species of the genus *Prothyma* and other Cicindelinae. Phil. J. Sci. Manila **22** 1923 pp. 357–363. [Col.]
- 1053.—**Hornstein**, K. Die Abbildungen der *Deilephila*-und *Smerinthus*-hybriden in Berge-Rebel's-und Seitz's Schmetterlingswerken. Ent. Zs. Frankfort o. M. **37** 1923 pp. 29–30. [Lep.]
- 1054.—**Horváth**, G. Adalék a nagyváradi Püspökfürdő faunájához. [Beitrag zur Fauna der Thermen von Grosswardein.] Allatt. Közlem. Budapest **15** 1916 pp. 103–107 (German summary p. 201). [Hem.]
- 1055.—**Horváth**, G. Über das sporadische Vorkommen gewisser Tierarten. Allatt. Közlem. **16** 1917 pp. 2–9 140. [Hem.]
- 1056.—**Horváth**, G. Genera duo nova Scutelleridarum. Ann. hist.-nat. Mus. Natnl. Hung. Budapest **18** 1921 pp. 145–146. [Hem.]
- 1057.—**Horváth**, G. La Punaise des groselliers. Rovart. L. Budapest **26** 1922 pp. 1–4. [Hom.]
- 1058.—**Horváth**, G. Description de trois espèces nouvelles, du genre *Cyrtocoris* A. White. Ann. hist.-nat. Mus. Natnl. Hung. Budapest **20** 1923 pp. 149–152 8 figs. [Hem.]
- 1059.—**Horváth**, G. A Fertö-tonak és közvetlen környékének Hemiptera-faunája. (Faunula Hemipterorum lacus Fertö in Hungaria occidentali regionisque adjacentis.) Ann. hist.-nat. Mus. Natnl. Hung. Budapest **20** 1923 pp. 182–199.
- 1060.—**Horváth**, G. Description d'un Miride nouveau de Corse (Hem.). Bull. Soc. ent. France Paris **1923** pp. 64–65.
- 1061.—**Horváth**, G. Hétéroptères d'Algérie nouveaux ou imparfaitement connus. Bull. Soc. Hist. nat. Afr. N. Algiers **14** 1923 pp. 201–206.
- 1062.—**Horváth**, G. A new species of *Galeatus* from New Mexico (Hemiptera-Tingitidae). Ann. Carnegie Mus. Pittsburgh **15** 1923 pp. 108–109.
- 1063.—**Hosp**, C. *Melitaea asteria* Frr., neue Form *obscura* Hosp. Intern. ent. Zs. Guben **16** 1923 pp. 199–200. [Lep.]
- 1064.—**Houlbert**, C. Tableaux génératifs illustrés des Coléoptères de France. Bull. Soc. sci. méd. Rennes **29** 1920 pp. 209–224, 225–240; **30** 1921 pp. 241–256, 257–288.
- 1065.—**Houlbert**, C. Contribution à l'étude des Melanarginae des régions Thyrréno-Ibériques. Études Lép. Rennes **21** 1923 pt. 1 pp. 1–82 47 figs.
- 1066.—**Houlbert**, C. & **Monnot**, E. Faune entomologique armoricaine. Coléoptères. Lamellicornes. Trav. sci. Univ. Rennes **13** 1915 pp. i–iii 1–171 203 figs.
- Houlbert**, C. see Oberthür & Houlbert.
- 1067.—**Houyez**, P. *Anthrocera filipendulae* Linné ab. *bimacula* n. ab. Rev. mens. Soc. ent. Namur **23** 1923 p. 58. [Lep.]
- 1068.—**Howard**, L. O. A side line in the importation of insect parasites of injurious insects from one country to another. Proc. Nat. Acad. Sci. Washington **8** 1922 pp. 133–139.
- 1069.—**Howard**, L. O. A curious phase of parasitism among the parasitic Hymenoptera. Canad. Ent. Orillia **55** 1923 pp. 223–224.
- 1070.—**Howe**, R. H. *Williamsonia lintneri* (Hagen), its history and distribution. Psyche Boston Mass. **30** 1923 pp. 222–225. [Odon.]
- 1071.—**Hubenthal**, W. Beiträge zur Kenntnis der Curculioniden-Gattung *Acicnemis* Lacordaire (Col.). Arch. Natg. Berlin Abt. A **83** Heft 8 (1917) 1919 pp. 92–160. Heft 9 (1917) 1919 pp. 53–155.

1072.—Hubenthal, W. *Clytanthus varius* F. var. *fontanae* nov. var. Ent. Blätter Berlin **19** 1923 p. 141. [Col.]

1073.—Hubter, A. R. Utah varieties of a rose root gall wasp (Hymenoptera). Psyche Boston Mass. **30** 1923 pp. 173–174.

1074.—Hudson, G. V. Descriptions of new species of Lepidoptera from New Zealand. Ent. Mo. Mag. London **59** 1923 pp. 64–65, 129–130, 179–181, 218.

1075.—Hudson, G. V. An index to New Zealand beetles. Trans. N. Z. Inst. Wellington **54** 1923 pp. 353–399. [Col.]

1076.—Huettner, A. F. The origin of the germ cells in *Drosophila melanogaster*. J. Morph. Philadelphia **37** 1923 pp. 385–419 2 pls.

1077.—Hull, A. F. B. A further account of breeding experiments with the Satyrine genus *Tisiphone*. Proc. Linn. Soc. N.S.W. Sydney **48** 1923 3 pp. xiii–xvi 2 pls.

1078.—Hull, A. F. B. Notes on the life-histories of Australian butterflies. Proc. Linn. Soc. N.S.W. Sydney **48** 1923 pp. xvii–xxii.

1079.—Hull, F. M. Notes on the family Nemestrinidae (Diptera). Ent. News Philadelphia **34** 1923 pp. 275–277.

1080.—Hull, F. M. Notes on the family Syrphidae (Diptera) with the description of a new species. Ohio J. Sci. Columbus **23** 1923 pp. 295–298.

1081.—Hulstaert, G. Les Agaristidae du Musée du Congo à Tervueren. Rev. zool. afr. Brussels **11** 1923 pp. 198–208. [Lep.]

1082.—Hulstaert, G. Une aberration albinique de *Hypolimnas dubia* Pal. Rev. zool. afr. Brussels **11** 1923 pp. 209–210. [Lep.]

1083.—Hulstaert, G. Hétérocères nouveaux du Congo belge. Rev. zool. afr. Brussels **11** 1923 pp. 406–411. [Lep.]

1084.—Hulstaert, G. Entomologische Bijdragen. I. Twee nieuwe *Chrysodemas* (Col.) van Kei. Naturwetenschappelijk Tijdschrift **5** 1923 pp. 131–132.

(n-12519 j) q

1085.—Hulstaert, G. On Lepidoptera from New Guinea, Kei, Tenimber, the Philippines, and Australia. Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 178–190 3 figs.

1086.—Hulstaert, G. On some Butterflies from New Guinea and Tenimber. Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 621–625. [Lep.]

1087.—Hulstaert, G. New Rhopalocera from Kei, Tenimber and New Guinea. Ann. Mag. Nat. Hist. London (9) **12** 1923 pp. 227–232. [Lep.]

1088.—Hungerford, H. B. The life-history of the toad bug, *Gelastocoris oculatus* Fabr. (Gelastocoridae). Kansas Univ. Sci. Bull. Lawrence **14** 1922 pp. 145–171 2 pls. 12 tables. [Hemipt.]

1089.—Hungerford, H. B. The Nepidae of North America. (Further studies in aquatic Hemiptera.) Kansas Univ. Sci. Bull. Lawrence **14** 1922 pp. 425–453 8 pls.

1090.—Hungerford, H. B. A new species of the genus *Buenoa* (Hemiptera, Notonectidae). Ent. News Philadelphia **34** 1923 pp. 149–152.

1091.—Hungerford, H. B. Notes on the eggs of Corixidae. Bull. Brooklyn Ent. Soc. **18** 1923 pp. 13–16 1 pl. [Hemipt.]

1092.—Hungerford, H. B. Some studies on the genus *Hydrometra* in America north of Mexico with description of a new species (Hydrometridae, Hemip.). Canad. Ent. Orillia **55** 1923 pp. 54–58 1 pl.

Hungerford, H. B. see Moore & Hungerford.

1093.—Hussey, R. F. The waterbugs (Hemiptera) of the Douglas Lake Region, Michigan. Occ. Paprs. Mus. Zool. Univ. Michigan Ann Arbor no. **75** 1919 23 pp.

Hussey, R. F. see Torre-Bueno & Hussey.

1094.—Hustache, A. Curculionidés nouveaux de l'Afrique tropicale. Ann. Soc. linn. Lyon **66** [1919] 1920 pp. 45–67. [Col.]

1095.—Hustache, A. Un nuevo *Peritelus* de España. An. Inst. gen. tec. Valencia Trab. Lab. Hist. nat. no. **10** 1921 pp. 1–6 2 figs. [Col.]

- 1095.—Hustache, A. Curculionidés nouveaux de l'Afrique tropicale. Ann. Soc. linn. Lyon **69** 1923 pp. 17–26. [Col.]
- 1097.—Hustache, A. Curculionidae Gallo-Rhénans. Ann. Soc. ent. France Paris **92** 1923 pp. 1–148 33 figs. [Col.]
- 1098.—Hustache, A. Nouveaux Ceuthorrhynchini exotiques. (Col., Curculionidae). Bull. Soc. ent. France Paris **1923** pp. 113–117.
- 1099.—Hustache, A. Deux Curculionidés anormaux (Col.). Bull. Soc. ent. France Paris **1923** p. 141 2 figs.
- 1100.—Hustache, A. Nouveaux Curculionidés d'Afrique (Coléoptères), 2<sup>e</sup> note. Bull. Mus. Hist. nat. Paris **1923** pp. 74–80.
- 1101.—Hustache, A. Mission Rohan-Chabot dans l'Angola et dans le Rhodésia (1914). Descriptions de Curculionidés nouveaux, 1<sup>o</sup> et 2<sup>o</sup> notes. Bull. Mus. Hist. nat. Paris **1923** pp. 147–153 & 234–239. [Col.]
- 1102.—Hustache, A. Curculionidae de la faune franco-rhénane, I. Ceuthorrhynchini. Misc. ent. Castanet-Tolosan **27** 1923 pp. 63–142 sep. pag. [Col.]
- 1103.—Hustache, A. Curculionidés nouveaux de Madagascar (Iièvre note). Ann. Soc. ent. Belg. Brussels **63** 1923 pp. 73–93. [Col.]
- 1104.—Hustache, A. Curculionidés nouveaux du Congo. Rev. zool. afr. Brussels **11** 1923 pp. 148–181. [Col.]
- 1105.—Hustache, A. Nouveaux Curculionidés du Maroc (Insectes Coléoptères). Bull. Soc. Sci. nat. Maroc Rabat **3** 1923 pp. 64–75.
- 1106.—Hutchinson, G. E. Contribution towards a list of the Insect Fauna of the South Ebudes, iv. The Hemiptera (Rhynchota). Scot. Nat. Edinburgh **143–144** 1923 pp. 185–191.
- Hyatt, P. see Ferris & Hyatt.
- 1107.—Hyslop, J. A. The Coleopterous family Plastoceridae. J. Washington Acad. Sci. **13** 1923 p. 375.
- 1108.—Hyslop, J. A. The present status of the Coleopterous family Plastoceridae. Proc. Ent. Soc. Washington **25** 1923 pp. 157–160 1 pl.
- 1109.—Iglesias, L. I. Enumeración de los curculiónidos de la Península Ibérica e Islas Baleares. (Continuación). Rev. Acad. Sci. Madrid **19** 1921 pp. 109–128, 198–224. [Col.]
- 1110.—Ilkingworth, J. F. Notes on Diptera occurring in Hawaii. Proc. Hawaiian Ent. Soc. Honolulu **1922** **5** 1923 pp. 265–269.
- Iltschew, see Buresch & Iltschew.
- 1111.—Inglis, C. M. The Fauna of the Darbhanga District, North Bihar. J. Bombay Nat. Hist. Soc. **29** 1923 pp. 136–145. [Odon.]
- 1112.—Ingram, A. & Macfie, J. W. S. Notes on some African Ceratopogoninae. Bull. Ent. Res. London **14** 1923 pp. 41–74 27 figs. [Dipt.]
- Ingram, A. see Macfie & Ingram.
- 1113.—Invrea, F. Note su alcune *Holopyga* (Hym., Chrysidae). Boll. Soc. ent. ital. Genoa **55** 1923 pp. 13–15.
- 1114.—Ionescu, C. N. Contribuțuni la fauna insectelor Collembole din România cuprinzând și forme caver-nicole. An. Acad. Române Bucarest **38** (1915–1916) 1920 pp. 1–48 2 pls. 17 figs.
- 1115.—Irwin-Smith, V. Studies in life-histories of Australian Diptera Brachycera. Pts. I & II. Proc. Linn. Soc. N. S. W. Sydney **48** 1923 pp. 49–81 50 figs. & pp. 368–380 18 figs.
- 1116.—Ischreyt, G. Zur Kenntniss der morphologischen Artmerkmale des Koleopterengenuss *Donacia*. Zool. Anz. Leipzig **58** 1922 pp. 36–43.
- 1117.—Isely, D. Notes on nesting of *Polistes* (Hymenoptera, Vespidae). Kansas Univ. Sci. Bull. Lawrence **14** 1922 pp. 341–343.
- 1118.—Ito, H. Les tubes de Malpighi de *Gnathocerus cornutus* pendant la métamorphose. Bull. biol. France & Belg. Paris **57** 1923 pp. 152–158 2 pls. [Col.]
- 1119.—Izquierdo, S., V. Nota sobre el huevo de *Eriocampoides limacina* ("Chape"). Rev. chil. Hist. nat. Santiago **25** (1921) 1923 pp. 120–123 1 fig. [Hym.]

1120.—Izquierdo S., V. Observaciones sobre la biología de la *Polythisana edmondssi*, Butl. Rev. chil. Hist. nat. Santiago **25** (1921) 1923 pp. 426–432 1 pl. [Lep.]

1121.—Jaap, O. Verzeichnis von Zooecidien bei Weinheim an der Bergstrasse. D. ent. Zs. Berlin **1923** pp. 53–60.

1122.—Jablonowski, J. Egy délszaki paizstetű hazankban. [Eine tropische Aphide in Ungarn.] Allatt. Közlem. Budapest **15** 1916 pp. 232–247, 339, 4 text-figs. [Hom.]

1123.—Jablonowski, J. Über das Vorkommen des *Eucalymnatus tesellatus* in Ungarn. Allatt. Közlem. Budapest **16** 1917 pp. 55–73, 141, 4 text-figs. [Hem.]

1124.—Jablonowski, J. Nochmals über die Schildläuse verzehrende Raupe. Rovart. L. Budapest **26** 1922 pp. 4–7 [Lep.]

1125.—Jacot, A. P. Shantung Coleoptera, I. China J. Sci. & Arts Shanghai **1** 1923 pp. 64–67 4 figs.

1126.—Jacobson, E. Micro-Dipteren als Ektoparasiten anderer Insekten. Tijdschr. Ent. The Hague **66** 1923 pp. 135–136.

1127.—Jacobson, G. De uno genere novo et specie nova e Chrysomelidarum tribu Clytrinorum. Ent. Mitt. Berlin **12** 1923 pp. 233–235 1 fig. [Col.]

1128.—Jaczewski, T. Ueber die fossilen Corixiden aus Boryslaw in Polen. Vorläufige Mitteilung. [Also in Polish.] Rozpraw w Wiadomości z Muzeum im. Dzieduszyckich **7–8** (1921–1922) 1923 pp. 55–59. [Hem.]

Jaczewski, T. see Gajl & Jaczewski.

1129.—James, R. Old haunts revisited—Wicken and the Deal Sandhills. Ent. Rec. London **35** pp. 149–153, 161–163.

1130.—Janisch, E. Ueber Alterserscheinungen bei Insekten und ihre bekämpfungsphysiologische Bedeutung. Die Naturwissenschaften Berlin **1923** pp. 929–931 1 fig. [Col.]

1131.—Jansson, A. Coleopterologiska bidrag, 6–7. Ent. Tidskr. Stockholm **44** 1923 pp. 175–179.

1132.—Jeannel, A. Les Trechinae (Coleoptera, Carabidae) de la Région Orientale. Ann. Mag. Nat. Hist. London (9) **12** 1923 pp. 393–435 18 figs.

1133.—Jeannel, R. Description d'un nouvel *Hydraena* de France (Col. Hydroph.). Bul. Soc. Hist. nat. Toulouse **48** 1920 pp. 14–16.

1134.—Jeannel, R. Tableau des espèces du genre *Geotrechus* Jeann. (Tréchides cavernicoles des Pyrénées). Bul. Soc. Hist. nat. Toulouse **48** 1920 pp. 16–18. [Col.]

1135.—Jeannel, R. Un nouveau *Geotrechus* de l'Ariège (Col. Carab.) Bul. Soc. Hist. nat. Toulouse **48** 1920 pp. 39–40.

1136.—Jeannel, R. Sur les segments génitaux des femelles des Pentatomides (Hémipt.). Bul. Soc. Hist. nat. Toulouse **48** [1920] 1921 pp. 43–47 3 figs.

1137.—Jeannel, R. Les *Trechus* des Pyrénées et de la chaîne cantabrique. Bul. Soc. Hist. nat. Toulouse **49** 1921 pp. 165–82. [Col.]

1138.—Jeannel, R. L'évolution de l'appareil copulateur dans le genre *Choleva* Latr. C.R. Acad. Sci. Paris **176** 1923 pp. 1014–1017. [Col.]

1139.—Jeannel, R. Esquisse du peuplement de l'Europe par les espèces du genre *Choleva* Latr. C.R. Acad. Sci. Paris **176** 1923 pp. 1242–1245. [Col.]

1140.—Jeannel, R. Origine de la faune entomologique des Carpates et des monts de Bihor. C.R. Acad. Sci. Paris **176** 1923 pp. 1505–1507. [Insecta.]

1141.—Jeannel, R. Sur l'évolution des Coléoptères aveugles et le peuplement des grottes dans les monts du Bihor, en Transylvanie. C.R. Acad. Sci. Paris **176** 1923 pp. 1670–1673.

1142.—Jeannel, R. Un nouveau *Bathysciola* des Pyrénées-Orientales (Col. Silphidae). Bull. Soc. ent. France Paris **1923** pp. 104–106.

1143.—Jeannel, R. Deux Staphylinides endogés aveugles des monts Bihor. Bul. Soc. Stiinte Cluj **1** 1923 pp. 337–347 14 figs. [Col.]

1144.—Jeannel, R. Etude préliminaire des Coléoptères aveugles du Bihor. Bul. Soc. Stiinte Cluj **1** 1923 pp. 411–472 56 figs.

1145.—Jeannel, R. Un nouveau *Drimeotus* endogé des monts Bihor. Bul. Soc. Stiinte Cluj 1 1923 pp. 604–605. [Col.]

1146.—Jeannel, R. Les *Choleva* de l'Italie (Coleopt. Silphidae). Boll. Soc. ent. ital. Genoa 55 1923 pp. 34–42.

1147.—Jedlicka, A. Un nouveau *Pterostichus* de Serbie. Časopis Českoslov. Společ. ent. Prague 20 1923 pp. 14–15. [Col.]

1148.—Jennings, H. S. Crossing-over and the theory that the genes are arranged in the chromosomes in serial order. Proc. Nat. Acad. Sci. Washington 9 1923 pp. 141–147.

1149.—Jennings, H. S. Some consequences of different extents of interference in the crossing-over of the genes. Proc. Nat. Acad. Sci. Washington 9 1923 pp. 147–149.

1150.—Jessen, K. En undersøisk Mose i Rungsted Havn og de senglaciaile Niveauforandringer i Øresund. [A submerged peat-bog in the harbour of Rungsted and changes of sea-level in the Sound in the late glacial period.] Medd. Geol. Copenhagen 14 1923 pp. 1–18 1 map. [In Danish with English summary.]

1151.—Joannis, J. de. Deux nouvelles espèces de Pyralidae du Maroc (Lep.). Bull. Soc. ent. France Paris 1922 1923 pp. 305–307 2 figs.

1152.—Joannis, J. de. Note sur *Tapinostola extrema* Hb. (Lep. Noctuidae). Bull. Soc. ent. France Paris 1922 1923 pp. 325–329 pl.

1153.—Joannis, J. de. Une chenille de *Megacraspedus* (Lep. Gelechiidae). Bull. Soc. ent. France Paris 1923 pp. 155–158.

1154.—Johannsen, O. A. North American Dixidae. Psyche Boston Mass. 30 1923 pp. 52–58 5 figs. [Dipt.]

1155.—John, O. A new *Hypopta* Hb. from Ferghana, with some notes on other species (Lepidoptera, Cossidae). Rev. russe Ent. Petrograd 18 1923 pp. 91–94.

1156.—John, O. Fakultative Viviparität bei Thysanopteren. Ent. Mitt. Berlin 12 1923 pp. 227–232.

1156a.—John, O. On a case of probable regeneration of a leg in a Thysanopteron. Ann. Mag. Nat. Hist. London (9) 12 1923 pp. 532–534 1 fig.

1157.—Johnson, C. W. A review of the Platopezidae of Eastern North America. Occ. Paprs. Soc. Nat. Hist. Boston 5 1923 pp. 51–58 1 pl. [Dipt.]

1158.—Johnson, C. W. New species of North American Cyrtidae. Psyche Boston Mass. 30 1923 pp. 49–51. [Dipt.]

1159.—Johnson, C. W. Notes on the nests of *Odynerus* (*Ancistrocerus*) *birenimaculatus* Saussure. Psyche Boston Mass. 30 1923 pp. 226–227. [Hym.]

1160.—Johnston, T. H. & Hardy, G. H. A Revision of the Australian Diptera belonging to the Genus *Sarcophaga*. Proc. Linn. Soc. N.S.W. Sydney 48 1923 pp. 94–129 28 figs.

1161.—Johnston, T. H. & Hardy, G. H. Observations regarding the life-cycle of certain Australian blowflies. Proc. R. Soc. Queensland Brisbane 35 1923 pp. 21–42 10 tables. [Dipt.]

1162.—Joycey, J. J. New forms of butterflies from Buru. Entomologist London 56 1923 pp. 25–28. [Lep.]

Jones, E. E. see Little & Jones.

1163.—Jones, F. M. Variation in *Thyridopteryx*: Two new Psychids (Lep. Psychidae). Ent. News Philadelphia 34 1923 pp. 97–103 2 pl.

1164.—Jordá, J. Contribució al coneixement des Coleòpters de les Balears.—Formes inèdites II, III. Butl. Inst. catal. Hist. nat. Barcelona (2) 3 1923 pp. 103–109, 129–137. [Col.]

1165.—Jordan, K. A moth with a stridulatory apparatus. Trans. Ent. Soc. London 1922 1923 p. xxiv. [Lep.]

1166.—Jordan, K. The tympanal organ of *Speiredonia* (Noctuidae). Trans. Ent. Soc. London 1922 1923 pp. lxxix.

1167.—Jordan, K. The scent-organ of certain mimetic Castniidae. Trans. Ent. Soc. London 1922 1923 p. xci. [Lep.]

**1168.**—**Jordan, K.** On the comb-bearing flap present on the fourth abdominal segment in the males of certain Notodontidae. Nov. Zool. Tring 30 1923 pp. 153–154 1 pl. [Lep.]

**1169.**—**Jordan, K.** On a sensory organ found on the head of many Lepidoptera. Nov. Zool. Tring 30 1923 pp. 155–158 1 pl.

**1170.**—**Jordan, K.** On the scent-organs in the males of certain American Castniidae. Nov. Zool. Tring 30 1923 pp. 159–162 7 figs. [Lep.]

**1171.**—**Jordan, K.** A note on the families of Moths in which  $R^2$  (= vein 5) of the forewing arises from near the centre or from above the centre of the cell. Nov. Zool. Tring 30 1923 pp. 163–166 1 pl. [Lep.]

**1172.**—**Jordan, K.** New Eastern Anthribidae. Nov. Zool. Tring 30 1923 pp. 167–185. [Col.]

**1173.**—**Jordan, K.** Four new Sphingidae discovered by T. R. Bell in North Kanara. Nov. Zool. Tring 30 1923 pp. 186–190 10 figs. [Lep.]

**1174.**—**Jordan, K.** New Anthribidae from the Eastern Hemisphere. Nov. Zool. Tring 30 1923 pp. 216–221. [Col.]

**1175.**—**Jordan, K.** On *Anaitis efformata* Guen. (1858). A species distinct from *A. plagiata* L. (1758). Nov. Zool. Tring 30 1923 pp. 243–246 9 figs. [Lep.]

**1176.**—**Jordan, K.** A new species of Hawkmoth from Borneo. Nov. Zool. Tring 30 1923 pp. 268–269 2 figs. [Lep.]

**1177.**—**Jordan, K.** Ueber einige alte und neue Sphingiden (Lep.). Ent. Mitt. Berlin 12 1923 pp. 51–59 10 figs.

**1178.**—**Jordan, K. & Rothschild, N. C.** Additions to the catalogue of Swiss Siphonaptera. Ectoparasites Tring 1 1923 pp. 287–289 1 fig.

**1179.**—**Jordan, K. & Rothschild, N. C.** Further records of Algerian Siphonaptera. Ectoparasites Tring 1 1923 pp. 290–292.

**1180.**—**Jordan, K. & Rothschild, N. C.** On some Siphonaptera from the Eastern Hemisphere. Ectoparasites Tring 1 1923 pp. 293–308 18 figs.

**1181.**—**Jordan, K. & Rothschild, N. C.** New American Siphonaptera. Ectoparasites Tring 1 1923 pp. 309–319 9 figs.

**1182.**—**Jordan, K. & Rothschild, N. C.** On the genera *Rhopalopsyllus* and *Parapsyllus*. Ectoparasites Tring 1 1923 pp. 320–370 25 figs. [Siphon.]

**1183.**—**Jucci, (C.)**, Sulla curva di sviluppo del baco da seta. Boll. Lab. Zool. R. Scuola sup. Agric. Portici. 16 1923 pp. 59–136. [Lep.]

**1184.**—**Junker, H.** Cytologische Untersuchungen an den Geschlechtsorganen der halbwittrigen Steinfliege *Perla marginata* (Panzer). Arch. Zellforsch. Leipzig 17 1923 pp. 185–259 4 pls. 11 figs.

**1185.**—**Jurriaanse, J. H.** Some remarks about the supposed scent-organs of the genus *Opsiophanes*. Tijdschr. Ent. The Hague 66 1923 pp. 147–151. [Lep.]

**1186.**—**Jurriaanse & Lindemans.** *Papilio castor* ab. n. *necopinatus*. Tijdschr. Ent. The Hague 64 1921 pp. liii–liv. [Lep.]

**1187.**—**Jurriaanse, J. H. & Volbeda, G.** A new form of butterfly from Tenimber. Tijdschr. Ent. The Hague 66 1923 p. 151. [Lep.]

**1188.**—**Just, G.** Der Nachweis von Mendelzahlen bei Formen mit niedriger Nachkommenzahl. Arch. mikr. Anat. Berlin 97 1923 pp. 397–418. [Dipt.]

**1189.**—**Kadocsá, Gy.** A veresmyákú árpabogár (*Lema melanopus* L.) életmódja és irtása. Kisérletűgyi Közlemények Budapest 18 1915 pp. 109–178 13 figs. (Summary in German.) [Col.]

**1190.**—**Kadota, J.** On the testis of *Antheraea pernyi*. Dobuts. Z. Tokyo 33 1921 pp. 103–106. [Not seen.] [Lep.]

**1191.**—**Kano, T.** On a new aberrant form of *Ithona hexaspilota* Hope. Mthly. Common Insect Mag. Hanazono-Taniguchi 1 1923 no. 3 p. 16. [Neur.]

**1192.**—**Karny, H.** Zwei neue Laubheuschrecken aus Albanien. Verh. zool.-bot. Ges. Wien 68 1918 pp. 35–39. [Orth.]

- 1193.—Karny, H. Vorläufige Mitteilungen über die Thysanopteren, die auf der von F. Werner unternommenen zoologischen Expedition nach dem anglo-ägyptischen Sudan 1914 von R. Ebner gesammelt werden. *Anz. Ak. Wiss. Wien* 57 1920 pp. 27–29.
- 1194.—Karny, H. Zur Deutung der de Haan'schen Laubheuschrecken. *Zool. Meded. Leiden* 5 1920 pp. 139–210. [Orth.]
- 1195.—Karny, H. H. Ueber *Cerapterus horsfieldi* (Col. Pauss.). *Treubia Buitenzorg* 3 1923 p. 188.
- 1196.—Karny, H. H. Zur Nomenklatur der Phasmoiden. *Treubia Buitenzorg* 3 1923 pp. 230–242. [Orth.]
- 1197.—Karny, H. H. Beiträge zur Malayischen Thysanopterenfauna. *Treubia Buitenzorg* 3 1923 pp. 277–380 54 figs. 1 pl. [Thys.]
- 1198.—Karny, H. H. Mecapteren von Tjibodas. *Treubia Buitenzorg* 3 1923 pp. 381–383 2 figs. [Neur.]
- 1199.—Karny, H. H. Eine neue *Coniopteryx* aus Buitenzorg (Neur. Megalopt.). *Treubia Buitenzorg* 3 1923 pp. 384–386 1 fig.
- 1200.—Karny, H. H. On Malaysian Katydidids (Gryllacridae and Tettigoniidae) from the Raffles Museum, Singapore. *J. Malayan Br. R. Asiat. Soc. Singapore* 1 1923 pp. 116–193 figs. pl. [Orth.]
- 1201.—Karny, H. H. Thysanoptera from Siam and Indo-China. *J. Siam Soc. [Bangkok]* 16 [1923 ?] pp. 91–153.
- 1202.—Karny, H. H. Over een merkwaardigen Bidsprinkhaan. *Tropische Natuur* 1923 pp. 65–67 1 fig. [Orth.]
- 1203.—Karny, H. H. Ueber die Anwendung der Nomenklaturregeln. *Ent. Mitt. Berlin* 12 1923 pp. 168–198.
- 1204.—Karny, H. H. A new *Liothrips* from Trinidad. *Ann. Mag. Nat. Hist. London (9)* 12 1923 pp. 160–164. [Thysanopt.]
- 1205.—Karny, H. H. On two *Tubulifera* inhabiting acacia galls in Egypt (Thysanoptera). *Bull. Soc. R. ent. Egypte Cairo* 1922 1923 pp. 127–132.
- 1206.—Kautz, H. Eine neue Aberration von *Melitaea didyma*. *Verh. zool.-bot. Ges. Wien* 69 1919 pp. (122)–(123). [Lep.]
- 1207.—Kaye, W. J. New species of Trinidad moths. *Proc. Zool. Soc. 1922 pp. 991–998* 1 pl. [Lep.]
- 1208.—Kaye, W. J. Butterflies from Venezuela. *Trans. Ent. Soc. London 1922* 1923 pp. xcvi–ci. [Lep.]
- 1209.—Kaye, W. J. A striking new Lycaenid from St. Vincent. *B. W. I. Entomologist London* 56 1923 p. 277. [Lep.]
- 1210.—Keilin, D. On the calcium carbonate and calcospherites in the Malpighian tubes and the fat-body of Dipterous larvae and the ecdysial elimination of the products of excretion. *Q. J. Microsc. Sci. London N. S. 65* 1921 pp. 611–625 5 figs.
- 1211.—Keller, G. J. Notes on the ovum and larva of *Catocala herodias* Strecker. *Lepidopterist Salem* 3 1920 pp. 121–123 figs.
- Kelly, J. B. see Ferris & Kelly.
- 1212.—Kelly, R. Thrips: An unpopular insect treated popularly. *Vict. Nat. Melbourne* 40 1923 pp. 49–57 1 pl. [Thysanoptera.]
- 1213.—Kemner, N. A. Hyphaenosyphilie, eine neue, merkwürdige Art von Myrmekophilie bei einem neuen myrmekophilen Schmetterling (*Wurthia aurivillii* n. sp.) aus Java beobachtet. *Ark. Zool. Stockholm* 15 no. 15 1923 28 pp. 7 figs. 4 pls. [Lep.]
- 1214.—Kennedy, C. H. The phylogeny and the geographical distribution of the genus *Erythemis*. *Univ. Michigan Mus. Zool. Misc. Publ. no. 11* pp. 19–22 figs. [Odon.]
- 1215.—Kennedy, C. H. The naiad of *Pantala hymenea* (Odonata). *Canad. Ent. Orillia* 55 1923 pp. 36–38 5 figs.
- 1216.—Kertész, A. Die bisher bekannten Lokalformen und Fluggebiete von *Parnassius apollo* in den ungarischen Karpathen. *Rovart. L. Budapest* 26 1922 pp. 23–33. [Lep.]
- 1217.—Kertész, A. Eine neue Lokalform des *Parnassius apollo* L. aus Transsilvanien (*Parn. apollo* L. v. *járaensis* mihi.). *Soc. ent. Stuttgart* 38 1923 pp. 9–10. [Lep.]

1218.—Kertész, K. *Myrmecosepsis*, a new genus of Diptera with very reduced wings. Ann. hist.-nat. Mus. Natnl. Hung. Budapest **12** 1914 pp. 244–246 2 figs.

1219.—Kertész, K. A Magyar Birodalom Sciomyzidái. [Die Sciomyziden Ungarns.] Allatt. Közlem. Budapest **14** 1915 pp. 81–126 5 figs. (German summary p. 193). [Dipt.]

1220.—Kertész, K. A Pachygasterinák nemeinek származástanai kapcsolata. [Phyletischer Verband der Pachygastrinen-Gattungen.] Allatt. Közlem. Budapest **15** 1916 pp. 107–119 1 plate (German summary p. 201). [Dipt.]

1221.—Kertész, K. Vorarbeiten zu einer Monographie der Notacanthen. xxxix-l. Ann. hist.-nat. Mus. Natnl. Hung. Budapest **18** 1921 pp. 153–176 14 figs.; **20** 1923 pp. 85–129 18 figs. [Dipt.]

1222.—Kessel, F. Zur geographischen Verbreitung der Cucujidae (Coleoptera). Erster Beitrag: Laemophloeini. Phil. J. Sci. Manila **22** 1923 pp. 91–99 1 fig.

1223.—Kieffer, J. J. Nouveaux Bethylides du Soudan égyptien. Ann. Soc. sci. Bruxelles **40** 1921 pp. 111–114. [Hym.]

1224.—Kieffer, J. J. Description de quelques Chironomides exotiques. Ann. Soc. sci. Bruxelles **40** 1921 pp. 181–186. [Dipt.]

1225.—Kieffer, J. J. Chironomides de Courlande. Ann. Soc. sci. Bruxelles **40** 1921 pp. 275–298. [Dipt.]

1226.—Kieffer, J. J. Neue Chironomiden aus Mitteleuropa. Arch. Hydrobiol. Stuttgart Supp. Vol. **2** 1921 pp. 785–808 28 figs. [Dipt.]

1227.—Kieffer, J. J. Diagnose de quelques nouveaux Tanypodines (Dipt.). Bull. Soc. ent. France Paris **1922** 1923 pp. 296–297.

1228.—Kieffer, J. J. Chironomides de l'Afrique équatoriale. Pt. 3. Ann. Soc. ent. France Paris **92** 1923 pp. 149–204 2 pls. [Dipt.]

1229.—Kieffer, J. J. Étude sur les Chironomides de Formose. Ann. Soc. linn. Lyon **69** 1923 pp. 27–41. [Dipt.]

1230.—Kieffer, J. J. Cératopogoninés recueillis au Sahara constantinois. Arch. Inst. Pasteur Algérie Algiers **1** 1923 pp. 654–683 27 figs. [Dipt.]

Kieffer, J. J. see Mercier, L.

1231.—Kieselbach, G. A légylárvák börérzékszerveiről. [Die Hautsinnesorgane der Musciden Larven.] Allatt. Közlem. Budapest **13** 1914 pp. 45–57 8 figs. [Summary in German p. 78.] [Dipt.]

1232.—Killington, F. J. Notes on Paraneuroptera for 1922 (Eastleigh, etc.). Ent. Rec. London **35** 1923 pp. 119–121.

1233.—King, R. L. Heteromorphic homologous chromosomes in three species of *Pseudotrimerotropis*. J. Morph. Philadelphia **38** 1923 pp. 19–48 8 pls.

1234.—[Kiritchenko, A. N.] Кириченко, А. Н. Инструкция для собирания полужестокрылых насекомых (Hemiptera-Heteroptera) и исследования местных фаун: [Instructions for the collection of Hemiptera-Heteroptera and investigation of local faunas.] Петроград. С. Х. Инст. Энт. Станц. [Petrograd Agric. Inst. Ent. Sta.] Petrograd 1923 Ser. B no. 4, 46 pp. 4 figs.

Kiritchenko, A. N. see Bianki & Kiritchenko.

1235.—Kinsey, A. C. New Pacific Coast Cynipidae (Hymenoptera). Bull. Amer. Mus. Nat. Hist. New York **46** 1922 pp. 279–296 1 pl.

1236.—Kinsey, A. C. The gall wasp genus *Neuroterus* (Hymenoptera). Indiana Univ. Studies **10** no. 58 1923 pp. 150 pp. 63 figs.

1237.—Kirk, H. B. Notes on the mating-habits and early life-history of the Culicid, *Opifex fuscus*, Hutton. Trans. N. Z. Inst. Wellington **54** 1923 pp. 400–406 3 figs. [Dipt.]

Kirk, W. H. see Weiss & Kirk.

1238.—Kirkpatrick, T. W. The Egyptian Cotton Seed Bug (*Oxycarenus hyalinipennis* Costa). Its bionomics, damage and suggestions for remedial measures. Min. Agric. Egypt Cairo Bull. **35** 1923 107 pp. 45 figs. [Hem.]

1239.—Kitt, M. Zusammenstellung der benannten Formen von *Lythria purpurata* L. unter Zugrundelegung der Publikationen von Prout, Zerny und Hannemann sowie unter Aufnahme der von mir beschreiben Formen. Verh. zool.-bot. Ges. Wien **67** 1917 pp. (200)–(202). [Lep.]

1240.—Kitt, M. Eine Form von *Brephos puella* Esp. Verh. zool.-bot. Ges. Wien **70** 1920 pp. (91)–(92). [Lep.]

1241.—Klapalek, F. Plécoptères nouveaux. Ann. Soc. ent. Belg. Brussels **63** 1923 pp. 21–29.

1242.—Kleine, R. Ueber die Gattung *Elytracantha* Kleine. Arch. Natg. Berlin Abt. A **83** Heft 1 (1917) 1919 pp. 37–42 8 figs. [Col.]

1243.—Kleine, R. *Mesitogenus* gen. nov. Brenthidarum (Arrhenodidarum). Arch. Natg. Berlin Abt. A **83** Heft 2 (1917) 1919 pp. 6–11 6 figs. [Col.]

1244.—Kleine, R. *Perisymmor-phocerus* gen. n. Trachelizidarum. Arch. Natg. Berlin Abt. A **83** Heft 2 (1917) 1919 pp. 12–18 9 figs. [Col.]

1245.—Kleine, R. Die Gattung *Debora* Power. Arch. Natg. Berlin Abt. A **83** Heft 2 (1917) 1919 pp. 18–37 9 figs. [Col.]

1246.—Kleine, R. Die Gattung *Ithystenus* Pascoe. Arch. Natg. Berlin Abt. A **83** Heft 7 (1917) 1919 pp. 40–136 87 figs. [Col.]

1247.—Kleine, R. Der Stridulationsapparat der Gattung *Liparus* Oliv. Arch. Natg. Berlin Abt. A **83** Heft 12 (1917) 1919 pp. 54–68 1 pl. [Col.]

1248.—Kleine, R. Über den Stridulationsapparat der Brenthidae. Arch. Naturg. Berlin **84** Abt. A Heft 10 (1918) 1920 pp. 1–84 figs. [Col.]

1249.—Kleine, R. Über die Gattung *Paryphobrenthus* Kolbe. Arch. Naturg. Berlin **84** Abt. A Heft 11 (1918) 1920 pp. 1–7. [Col.]

1250.—Kleine, R. Die Gattung *Ceocephalus* Schönherr. Arch. Naturg. Berlin **84** Abt. A Heft 11 (1918) 1920 pp. 7–51 figs. [Col.]

1251.—Kleine, R. I. Nachtrag zu meiner Arbeit über die Gattung *Ithy-stenus* Pascoe. Arch. Naturg. Berlin **85** Abt. A Heft 5 (1919) 1920 pp. 69–71 figs. [Col.]

1252.—Kleine, R. Der Brenthidenflügel. Arch. Naturg. Berlin **85** Abt. A Heft 8 (1919) 1920 pp. 1–30 figs. [Col.]

1253.—Kleine, R. Die Gattung *Jonthocerus* Lacordaire. Arch. Naturg. Berlin **85** Abt. A Heft 8 (1919) 1920 pp. 30–50 figs. [Col.]

1254.—Kleine, R. Ergebnis der Untersuchung Powerscher in litt. Arten nebst Beschreibung einer neuen Gattung des tribus Ceocephalini von Madagascar. Zool. Med. Leiden **6** 1921 pp. 58–63. [Col.]

1255.—Kleine, R. Die Gattung *Ectocemus* Pascoe. Arch. Natg. Berlin Abt. A **89** 1923 Heft 4 pp. 157–169 7 figs. [Col.]

1256.—Kleine, R. Bestimmungstabelle der Gattung *Arrhenodes* Schoenherr. Arch. Natg. Berlin Abt. A **89** Heft 4 1923 pp. 169–180 16 figs. [Col.]

1257.—Kleine, R. Neue Brenthiden aus der Sammlung Andrewes. Arch. Natg. Berlin Abt. A **89** 1923 Heft 8 pp. 132–137 3 figs. [Col.]

1258.—Kleine, R. Neue Brenthiden aus dem University Museum of Zoology zu Cambridge. Arch. Natg. Berlin Abt. A **89** 1923 Heft 8 pp. 127–131 4 figs. [Col.]

1259.—Kleine, R. Die Deutung der Walkerschen Brenthiden. D. ent. Zs. Berlin **1923** p. 90. [Col.]

1260.—Kleine, R. Neue biologische Beobachtungen bei Brenthiden (Col.). D. ent. Zs. Berlin **1923** pp. 619–623.

1261.—Kleine, R. Die Bedeutung der Meteorologie für die Bekämpfung der Schadeinsekten. Zs. wiss. Insektenbiol. Berlin **18** 1923 pp. 328–335.

1262.—Kleine, R. Nachtrag zur Gesamtliteratur der Borkenkäfer. Zs. angew. Ent. Berlin **9** 1923 pp. 165–180. [Col.]

1263.—Kleine, R. Neue Brenthiden von den Philippinen nebst faunistischen Bemerkungen. Ent. Blätter Berlin **19** 1923 pp. 157–167 7 figs. [Col.]

1264.—Kleine, R. De Brenthidarum Musaei Nationalis Pragae speciebus novis (Coleoptera). Bul. Sect. ent. Mus. Nat. Prague **1** 1923 pp. 48–54 1 fig. [Col.]

1265.—Kleine, R. New Brenthidae from the Raffles Museum, with remarks on the Brenthid fauna of the Malay Peninsula. J. Malayan Br. R. Asiat. Soc. **1** 1923 pp. 271–281 figs. [Col.]

1266.—Kleine, R. Neue Brenthiden (Col.) aus Niederländisch-Indien. Treubia Buitenzorg **3** 1923 pp. 405–410 6 figs.

1267.—K[löti]-H[auser]. Antineol als Konservierungsmittel für Insekten-sammlungen. Schweizer ent. Anz. Zürich **1** 1922 p. 45.

1265.—Klots, A. B. A new race of *Eurema proterpia* (Fabricius) (Lepid., Pieridae). Ent. News Philadelphia **34** 1923 p. 301.

Knabl, H. see Ammann & Knabl.

1269.—Knauss, O. Markische palaeno. Intern. ent. Zs. Guben **17** 1923 pp. 89–91. [Lep.]

Knechtel, V. see Motaş & Knechtel.

1270.—Knechtel, W. K. Neue Thyanopteren aus Rumänien. Bul. Acad. Roumaine Bucarest **8** 1923 pp. 71–76, 122–125 1 fig.

1271.—Knight, H. H. Hemiptera of Connecticut: Miridae (Capsidae). Conn. N. H. Surv. Hartford Bull. **34** 1923 pp. 422–658 1 pl. 142 figs.

1272.—Knight, H. H. Studies on the life history and biology of *Perillus bioculatus* Fabricius, including observations on the nature of the color pattern (Heteroptera, Pentatomidae). 19th Rept. Minnesota State Ent. St. Paul 1923 pp. 50–96 1 fig. 3 pls.

1273.—Knight, H. H. A new *Peritropis* from the eastern United States (Heteroptera, Miridae). Ent. News Philadelphia **34** 1923 pp. 50–52.

1274.—Knight, H. H. A fourth paper on the species of *Lopidea* (Heteroptera, Miridae). Ent. News Philadelphia **34** 1923 pp. 65–72 1 pl.

1275.—Knight, H. H. A new species of *Labopidea* on garlic (Heteroptera, Miridae). Bull. Brooklyn Ent. Soc. **18** 1923 p. 31. [Hem.]

1276.—Knirsch, E. *Pheggomisetes* nov. subgen. Trechorum coecorum ex Bulgaria. Časopis Českoslov. společ. Ent. Prague **20** 1923 pp. 2–5 1 pl. [Col.]

1277.—Knisch, A. Neue paläarktische Hydrophiliden. Verh. zool.-bot. Ges. Wien **64** 1914 pp. (114)–(117). [Col.]

1277.—Knisch, A. Die exotischen Hydrophiliden des Deutschen Entomologischen Museums. Arch. Natg. **85** Abt. A Heft 8 (1919) 1920 pp. 55–88. [Col.]

1278.—Knop, T. *Pieris brassicae* L. ♀ ab. *rammei* nov. ab. Ent. Zs. Frankfurt o. M. **36** 1923 p. 68. [Lep.]

1279.—Knudsen, V. S. Jydske Egne. I. Justrup Sø og Omegn. Flora og Fauna Copenhagen **1921** pp. 26–37 figs.

1280.—Knudsen, S. Sommerfuglenetiser fra Jylland 1920–22. [A catalogue of Lepidoptera observed in Jutland in 1920–22.] Flora og Fauna Copenhagen **1923** pp. 8–12. [In Danish.]

1281.—Knull, J. N. *Agrius bilineatus* var. *carpini*, new name. Canad. Ent. Orillia **55** 1923 p. 105.

Knull, J. N. see Champlain & Knull.

1282.—Köhler, P. Fauna argentina. Lepidoptera e collectione Alberto Breyer. I. Teil. Rhopalocera. Systematischer Katalog und Studien, Berichtigungen u. Neubeschreibungen. Zs. wiss. Insektenbiol. Berlin **18**. Beiheft 1923 34 pp. 3 pls. 6 maps.

1283.—Kolbe, H. Über das Klima und die Insektenwelt Mitteleuropas während der Eiszeit und der Nacheiszeit. D. ent. Zs. Berlin **1923** pp. 1–32.

1284.—Komp, W. H. Guide to mosquito identification for field workers engaged in malaria control in the United States. Pub. Health Repts. Washington D.C. **38** 1923 pp. 1061–1080 17 figs. [Dipt.]

1285.—Komp, W. H. Notes on *Culex floridanus* D. & K. (Diptera, Culicidae). Insec. Insc. Menst. Washington D.C. **11** 1923 pp. 133–135 1 pl.

1286.—Kopeć, S. The influence of the nervous system on the development and regeneration of muscles and integument in Insects. J. Exptl. Zool. Philadelphia **37** 1923 pp. 15–231 pl. 7 figs.

- 1287.—Kotlán, A. Über die Blut-  
aufnahme als Nahrung bei den Mallo-  
phagen. Zool. Anz. Leipzig **56** 1923  
pp. 231–233.
- 1288.—Kafka, J. Morphology of  
the head of Trichopterous larvae as a  
basis for the revision of the family  
relationships. J. New York Ent. Soc.  
**31** 1923 pp. 31–52 4 pls. 1 fig.
- 1289.—Krausse, A. Über einige  
Panorpaformen aus Nordfrankreich.  
Arch. Natg. Berlin Abt. A **83** Heft 1  
(1917) 1919 pp. 50–51 9 figs. [Neur.]
- 1290.—Krausse, A. Hexapodolo-  
gische Notizen. (IV; 52–68). Arch.  
Natg. Berlin Abt. A **83** Heft 6 (1917)  
1919 pp. 49–55.
- 1291.—Krausse, A. Hexapodolo-  
gische Notizen. (V; 69–84). Arch.  
Natg. Berlin Abt. A **83** Heft 11 (1917)  
1919 pp. 72–77.
- 1292.—Krausse, A. & Wolff, M.  
Eine Uebersicht über die bisher auf-  
gestellten fossilen und rezenten Insek-  
tenordnungen. Arch. Natg. **85**  
Abt. A Heft 3 (1919) 1920 pp. 151–171.
- Krausse, A. see Wolff & Krausse.
- 1293.—Krekich-Strassoldo, H. de.  
Gli Anticidi del litorale e della Dal-  
matia. Boll. Soc. Adriat. Sci. nat.  
Trieste **26** Parte 2 1912 pp. 63–78 pl.  
[Col.]
- 1294.—Krekich-Strassoldo, H. v.  
Neue Anthiciden. Verh. zool.-bot. Ges.  
Wien **64** 1914 pp. (108)–(114). [Col.]
- 1295.—Krekich-Strassoldo, H. v.  
Beiträge zur Kenntnis der Anthiciden.  
Verh. zool.-bot. Ges. Wien **64** 1914  
pp. (215)–(228) 6 figs. [Col.]
- 1296.—Kriesche, R. Neue Chias-  
gnathinen (Coleopt. Lucanid.). Arch.  
Natg. Berlin Abt. A **83** Heft 11 (1917)  
1919 pp. 93–95.
- 1297.—Kriesche, R. Bemerkungen  
über einige Trietenotomiden (Coleopt.).  
Arch. Natg. Berlin Abt. A **83** Heft 11  
(1917) 1919 p. 150.
- 1298.—Kriesche, R. Neue Bato-  
ceriden. Arch. Natg. Berlin **85** Abt.  
A Heft 5 (1919) 1920 pp. 192–198.  
[Col.]
- 1299.—Kriesche, R. Tmesisterninen-  
Studien. (Col. Ceramb.) I. D. ent. Zs.  
Berlin **1923** pp. 280–286.
- 1300.—Kriesche, R. Zwei neue  
Zaeera-Arten von Deutsch-Neuguinea.  
(Col. Ceramb.). D. ent. Zs. Berlin 1923  
pp. 337–338.
- 1301.—Kriesche, R. Neue papua-  
nische Dorcadioninen (Col. Ceramb.).  
D. ent. Zs. Berlin 1923 pp. 425–428.
- 1302.—Kriesche, R. Neue Potem-  
neninen von Deutsch - Neu - Guinea  
(Col. Cer. Lam.). D. ent. Zs. Berlin  
1923 pp. 428–430.
- 1303.—Kriesche, R. Megalobrimus  
lettowvorbecki n. sp. (Col. Cer. Lam.).  
D. ent. Zs. Berlin **1923** pp. 430–431.
- 1304.—Kröber, O. Beiträge zur  
Kenntnis der Conopiden. Arch. Natg.  
Berlin Abt. A **83** Heft 7 (1917) 1919  
pp. 141–143. [Dipt.]
- 1305.—Kröber, O. Katalog der  
Conopiden, nebst Beschreibung der  
Gattungen und Bestimmungstabellen  
der Gattungen und Arten. Arch. Natg.  
Berlin Abt. A **83** Heft 8 (1917) 1919  
pp. 1–91; Heft 9 pp. 1–52 9 pls. [Dipt.]
- 1306.—Krueger, E. Kurze Über-  
sicht über die Morphiden Columbiens.  
Ent. Rdsch. Stuttgart **40** 1923 pp. 31–  
32. [Lep.]
- 1307.—Krüger, L. Sisyridae. Beiträge  
zu einer Monographie der Neuropteren-  
Familie der Sisyriden. Stettin. ent.  
Ztg. **84** 1923 pp. 25–66.
- 1308.—Krüger, L. Neuroptera suc-  
cinica baltica. Die im baltischen  
Bernstein eingeschlossenen Neuropteren  
des Westpreussischen Provinzial-Mu-  
seums in Danzig. Stettin. ent. Ztg. **84**  
1923 pp. 68–92.
- 1309.—Kryger, J. P. Om Snylte-  
hvæpse. [The life-history of the Danish  
Ichneumonidae with a catalogue of  
the species.] Flora og Fauna Copen-  
hagen **1923** pp. 41–48, 97–105 17 tigs.  
[In Danish.]
- 1310.—[Kulagin, N. M.] Кулагин,  
H. M. Du développement de certaines  
variétés des acridiens. Bull. Soc. ent.  
Moscou **2** no. 2 1923 pp. 1–11 4 pls.  
[Orth.] [In Russian.]
- 1311.—Kun, H. Experimentelle  
Untersuchungen mit Hilfe der Kopf-  
transplantation über die Färbungs- und  
Sexualcharaktere bei Wasserinsekten.  
Intern. Rev. Hydrobiol. Leipzig **11** 1923  
pp. 100–103.

**1312.**—**Kunhi Kannan, K.** The function of the prothoracic plate in Mylabrid (Bruchid) larvae (a study in adaptation). Mysore Dept. Agric. Bangalore Ent. Ser. Bull. **7** 1923 47 pp. 3 pls. [Col.]

**1313.**—**Kuntze, R.** Analyse génétique de la variabilité de la coloration chez les Coléoptères *Melasoma aenea* L. C.R. Soc. Biol. Paris **89** 1923 pp. 1392-1394.

**1314.**—**Kuntze, R.** Für Polen neue und seltenere Käfer aus Podolien. Polskie Pismo Ent. Lemberg **2** 1923 pp. 30-35. [Col.]

**1315.**—**Kuntze, R.** Die Rassen des *Carabus cancellatus* Ill. in Polen—Revision der Begriffe und Versuch einer biometrischen Bearbeitung. Polskie Pismo Ent. Lemberg **2** 1923 pp. 63-82 2 figs. [Col.]

**1316.**—**Kusnezow, N. N.** Die genetischen Elemente der Ameisenfauna des russischen Turkestan. Zool. Anz. Leipzig **57** 1923 pp. 82-88. [Hym.]

**1317.**—**Kuwana, I.** The Chinese white-wax scale, *Ericerus pela*, Chavannes. Philipp. J. Sci. Manila **22** 1923 pp. 393-406 2 pls. [Hom.]

**1318.**—**Kuwana, I.** On the Genus *Leucaspis* in Japan. Dobuts. Z. Tokyo **35** 1923 pp. 319-324 1 pl. [Hom.]

**1319.**—**Kuwayama, S.** Studies on the Dilaridae of Japan. Trans. Sapporo Nat. Hist. Soc. **8** 1921 pp. 51-83 1 pl. [Neur.]

**1320.**—**Kuwayama, S.** On some aberrations of Japanese butterflies. Dobuts. Z. Tokyo **33** 1921 pp. 332-337 1 pl. [Lep.]

**1321.**—**[Kuzin, B. S.]** Кузин, Б. С. Водяные жуки окрестностей Мурома. [Water Beetles of the Vicinity of Murom.] Arb. Biol. Oka-Station (Murom, Russland) **2** 1923 pp. 96-105. [Col.]

**1322.**—**Labitte, A.** Observations sur un nid de "Vespa media." Ann. Sci. nat. (Zool.) Paris (10) **6** 1923 pp. 113-116 14 figs. [Hym.]

**1323.**—**Laboissière, V.** Descriptions de deux espèces et trois variétés nouvelles de Galerucini africains de la

collection du British Museum (Col. Chrysomelidae). Bull. Soc. ent. France Paris **1923** pp. 206-208.

**1324.**—**Laboissière, V.** Descriptions de Galerucini nouveaux d'Afrique. Ann. Soc. ent. Belg. Brussels **62** 1923 pp. 183-192. [Col.]

**1325.**—**Lacroix, D. S.** Notes on the Cape Cod brood of Periodical Cicada during 1923. Psyche Boston Mass. **30** 1923 pp. 203-206. [Hom.]

**1326.**—**Lacroix, J.** Quelques Névroptères recueillis dans les départements de l'Ain, le Rhône, l'Isère, l'Ardèche, la Drôme, l'Arréege et les Hautes-Pyrénées. Ann. Soc. linn. Lyon **65** [1918] 1919 pp. 91-97.

**1327.**—**Lacroix, J. L.** Notes sur quelques Névroptères. Ann. Soc. linn. Lyon **67** [1920] 1921 45-59 2 figs.

**1328.**—**Lacroix, J. L.** Etudes sur les Chrysopides. Deuxième mémoire. Ann. Soc. linn. Lyon **69** 1923 pp. 119-144. [Neur.]

**1329.**—**Lacroix, J. L.** Chrysopides nouveaux (Planipennia). Bull. Soc. ent. France Paris **1923** pp. 119-122 2 figs. [Neur.]

**1330.**—**Laidlaw, F. F.** On a new and interesting dragonfly from Gunong Jahan. J. Malayan Br. R. Asiat. Soc. **1** 1923 pp. 231-232 pl. [Odon.]

**1331.**—**Laidlaw, F. F.** A survey of the dragonfly fauna of the Malay Peninsula, with notes on that of neighbouring countries. Part I. J. Malayan Br. R. Asiat. Soc. **1** 1923 pp. 319-333 figs. [Odon.]

**1332.**—**Laidlaw, F. F.** The dragonflies (Odonata) of Burma and Lower Siam.—III. Subfamily Aeschninae. Proc. U. S. Nat. Mus. Washington D.C. **62** 1923 art. 21 no. 2467 pp. 1-29 1 pl.

**1333.**—**Laing, F.** Aphidological notes (Hemiptera-Homoptera). Ent. Mo. Mag. London **59** 1923 pp. 238-247 4 figs.

**1334.**—**Laing, F.** On some Psyllidae (Hem.-Hom.) from the New World. Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 696-705 7 figs.

**Laing, F.** see Green & Laing.

1335.—**Lallemand, V.** Description de quelques nouveaux Cercopides de la faune Indo-malaise. *J. Malayan Br. R. Asiat. Soc.* **1** 1923 pp. 267–270. [Hom.]

1336.—**Lallemand, V.** Notes sur les Cercopides africains. *Ann. Mag. Nat. Hist. London* (9) **11** 1923 pp. 230–235. [Hom.]

1337.—**Lallemand, V.** Nouveaux Cercopides des Philippines [& Sumatra]. *Phil. J. Sci. Manila* **22** 1923 pp. 101–108. [Hom.]

1338.—**Lambertie, M.** Sur un cas tétratologique de *Chrysomela banksi* F. *Proc.-verb. Soc. linn. Bordeaux* **72** 1920 p. 119 1 fig. [Col.]

1339.—**Lambertie, M.** Distribution géographique de quelques espèces d'Hémiptères de la faune girondine. *Proc.-verb. Soc. linn. Bordeaux* **75** 1923 pp. 88–94.

**Lancefield, R. C.** see Ferry, Lancefield & Metz.

1340.—**Landis, E. M.** A tabular account of the structural differences between the four larval instars of *Culex pipiens*. *Trans. Amer. Ent. Soc. Philadelphia* **49** 1923 pp. 25–42 4 pls. [Dipt.]

1341.—**Landl, A.** A Pókok izomrendszer. ii. Azismok osszekötetése más szövetekkel. *Math. Term. Ert. Budapest* **36** 1918 pp. 551–561. [Col.]

1342.—**Landrock, K.** Die Pilzmücken Mährens. III–IV. *Zs. Mähr. Landesmuseums Brünn* **14** 1914 pp. 14–93 39 figs.; **17** 1919 pp. 17–75 11 figs. [Dipt.]

1343.—**Landrock, K.** Neue mährische Arten der Pilzmückengattung *Docosia* Winn. *Zs. Mähr. Landesmuseums Brünn* **15** 1916 pp. 59–66 13 figs. [Dipt.]

1344.—**Landrock, K.** Die Pilzmücken Mährens. I. Nachtrag. *Wiener ent. Ztg.* **40** 1923 pp. 163–171. [Dipt.]

1345.—**Lang, W. D.** Evolution: a resultant. C. The case of recent Lepidoptera. *Proc. Geol. Ass. London* **34** 1923 pp. 16–19 1 fig. [Lep.]

1346.—**Larson, A. O. & Simmons, P.** Notes on the biology of the Four-

spotted Bean Weevil, *Bruchus quadrimaculatus*, Fab. *J. Agric. Res. Washington D.C.* **26** 1923 pp. 609–616. [Col.]

**Lathrop, F. H.** see Osborn & Lathrop.

1347.—**Lathy, P. I.** Further notes on the Castniinae in the Collection of Madame Gaston Fournier (Lepidoptera). *Ann. Mag. Nat. Hist. London* (9) **12** 1923 pp. 223–227.

1348.—**Latzel, R.** Neue Kollembolen aus den Ostalpen und dem Karstgebiete. *Verh. zool.-bot. Ges. Wien* **67** 1917 pp. 232–252.

1349.—**Lavallée, A.** Comportement et homochromie de la chenille du *Sphinx pinastri*, L. (Lepidoptera). *Bull. Soc. ent. France Paris* **1923** pp. 19–20.

1350.—**Lavalée, A.** Observations sur *Larentia variata*, Schiff. et *L. obeliscata*, Hb. (Lep. Geometridae). *Bull. Soc. ent. France Paris* **1922** 1923 pp. 308–310.

1351.—**Lawson, P. B.** The Membracidae of Kansas. *Kansas Univ. Sci. Bull. Lawrence* **14** 1922 pp. 31–110 7 pls. [Hom.]

1352.—**Lawson, P. B.** The genus *Acinopterus* (Homoptera, Cicadellidae). *Kansas Univ. Sci. Bull. Lawrence* **14** 1922 pp. 113–139 5 pls.

1353.—**Lea, A. M.** Australian dung beetles of the sub-family Coprides. *Rec. S. Aust. Mus. Adelaide* **2** 1923 pp. 353–396 4 pls. [Col.]

1354.—**Lea, A. M.** On Australian Staphylinidae (Coleoptera). *Trans. R. Soc. S. Aust. Adelaide* **47** 1923 pp. 1–53 32 figs.

1355.—**Lea, A. M.** The flora and fauna of Nuyts Archipelago and the Investigator Group. No. 11. The Coleoptera of Pearson Island. *Trans. R. Soc. S. Aust. Adelaide* **47** 1923 pp. 355–360 1 pl.

1356.—**Lea, A. M.** On some Australian Galerucidae (Coleoptera, Chrysomelidae). *Proc. Linn. Soc. N.S.W. Sydney* **48** 1923 pp. 519–575 60 figs.

1357.—**Lea, A. M.** On Australian Aphodiidae (Coleoptera). *Proc. R. Soc. Vict. Melbourne* **36** 1923 pp. 1–20.

1358.—Lebedev, A. G. *Anthidium (Proanthidium) transcaspicum*, sp. n. (Hymenoptera Apoidea). Rev. russe Ent. Petrograd **18** 1923 pp. 137–138 1 fig.

1359.—Lécaillon, —. La variabilité de l'espèce chez le bombyx du mûrier. Mém. Acad. Sci. Inscript. Toulouse (11) **9** 1921 pp. 224–225. [Lep.]

1360.—Le Cerf, F. Description d'un Saturnide africain nouveau. Bull. Mus. Hist. nat. Paris **1923** pp. 51–52 1 fig. [Lep.]

1361.—Le Cerf, F. Descriptions de formes nouvelles de Lépidoptères Rhopalocères. Bull. Mus. Hist. nat. Paris **1923** pp. 360–367, 428–429.

1362.—Le Cerf, F. Lépidoptères nouveaux recueillis au Maroc par M. H. Ungemach. Bull. Soc. ent. France Paris **1923** pp. 197–200.

1363.—Le Cerf, F. Lépidoptères nouveaux du Maroc. Bull. Soc. ent. France Paris **1923** p. 214.

1364.—Lederer, G. Handbuch für den praktischen Entomologen. Vol. II. Tagfalter. Verlag internat. Entomologenvereins Frankfurt o. M. 1921 iv + 172 pp. [Not seen.]

1365.—Le Doux, C. Acraeen - Studien. II. (Lep. Rhop.). D. ent. Zs. Berlin **1923** pp. 207–226.

1366.—Le Doux, C. Neue Formen von *Pieris zochalia* Bsd. und *Eronia cleodora* Hbn. D. ent. Zs. Berlin **1923** pp. 582–584. [Lep.]

1367.—Lefroy, H. M. Manual of Entomology, with special reference to economic entomology. London, Arnold 1923 xvi + 541 pp. 4 pls. 179 figs.

1368.—Leiby, R. W. & Hill, C. C. The twinning and monembryonic development of *Platygaster hiemalis*, a parasite of the Hessian fly. J. Agric. Res. Washington D.C. **25** 1923 pp. 337–349 5 pls. [Hym.]

1369.—Leman, G. B. C. Notes on Coccinellidae. Ent. Rec. London **35** 1923 pp. 11–12, 46–48. [Col.]

1370.—Le Moult, E. Note synonymique sur un hybride de *splendens* et de *punctataauratus* décrit par MM. A. Nicolas et E. Le Moult. Misc. ent. Castanet-Tolosan **27** 1923 p. 33. [Col.]

1371.—Leng, C. W. New species and synopsis of *Statira*. J. New York Ent. Soc. **31** 1923 pp. 184–188. [Col.]

1372.—Leng, C. W. & Mutchler, A. J. The Lycidae, Lampyridae and Cantharidae (Telephoridae) of the West Indies. Bull. Amer. Mus. Nat. Hist. New York **46** 1922 pp. 413–499 65 figs. [Col.]

1373.—Lengerken, H. v. Ueber den Erhaltungszustand von Bernsteininklusen. SitzBer. Ges. natf. Freunde Berlin **1921** pp. 84–86.

1374.—Lenz, F. *Thaumastoptera calceata* Mik. Eine gehäusetragende Tipulidenlarve. Arch. Natg. Berlin **85** Abt. A Heft 4 (1919) 1920 pp. 114–136 figs. [Dipt.]

1375.—Lenz, F. Die Metamorphose der Cylindrotomiden. Arch. Natg. Berlin **85** Abt. A Heft 6 (1919) 1920 pp. 113–146 figs. [Dipt.]

1376.—Lenz, F. Stratiomyidenlarven aus Quellen. Ein Beitrag zur Metamorphose der Stratiomyiden. Arch. Natg. Berlin Abt. A **89** 1923 Heft 2 pp. 39–62 22 figs. [Dipt.]

1377.—Lenz, F. Chironomidenlarven aus China. Intern. Rev. Hydrobiol. Leipzig **11** 1923 pp. 506–516 figs. [Dipt.]

1378.—Lenz, F. Die terrestrischen Jugendstadien der Chironomiden-Gattung *Phaenocladius* und verwandte Formen. Arch. Hydrobiol. Stuttgart **14** 1923 pp. 453–469 1 pl. [Dipt.]

1379.—Leon, N. Insectele sugătoare de sânge din România. [On the mouth parts of the blood-sucking insects of Rumania.] An. Acad. Române Bucharest **34** 1912 pp. 9–44 5 pls. 15 figs.

1380.—Leon, N. Contribuționi la studiul insectei *Cochylis ambiguella* Hüb. in România. An. Acad. Române Bucharest **35** 1913 pp. 53–83 21 figs. [Lep.]

1381.—Leon, N. Ueber die Speichel-pumpe der Culiciden. Centralbl. Bakt. Jena 1 Abt. **90** 1923 pp. 361–362 1 fig. [Dipt.]

1382.—Leonard, M. D. & Barber, G. W. The immature stages of the catnip leaf-hopper (*Eupteryx melissae* Curtis). J. New York Ent. Soc. **31** 1923 pp. 181–184 2 pls. [Hom.]

**Le Pontois**, A. *see* Glais & Le Pontois.

**1383.—Lesne**, P. Notes sur les Coléoptères Térédiles. 19. Diagnoses préliminaires de Bostrychides nouveaux de l'Afrique tropicale. Bull. Mus. Hist. nat. Paris 1923 pp. 55-60.

**1384.—Lesne**, P. Travaux scientifiques de l'Armée d'Orient (1916-1918) Coléoptères : Bostrychidae et Cleridae. Bull. Mus. Hist. nat. Paris 1923 pp. 240-242.

**1385.—Lesne**, P. & **Mercier**, L. Un Staphylinide parasite des Muscides fucicoles *Aleochara (Polystoma) algarum* Fauvel. Caractères adaptatifs de la larve à la vie parasitaire. Ann. Soc. ent. France Paris 91 1923 pp. 351-358 1 pl. 5 figs. [Col.]

**1386.—Lestage**, J. A. Un Trichoptère "alpin" (*Lithax niger* Hag.) dans la faune rhéophile belge. Ann. Biol. lacustre Brussels 12 1923 pp. 329-333.

**1387.—Lestage**, J. A. Etude sur la biologie des Plécoptères (suite). III. Notes sur *Perla abdominalis* Burm. IV. La théorie de la persistance des trachéo-branchies larvaires chez les Perlaria adultes. Ann. Biol. lacustre Brussels 12 1923 pp. 335-379.

**1388.—Lestage**, J. A. Etude sur les Palingeniidae (Ephémères) et description de deux genres nouveaux et d'une espèce nouvelle de la Nouvelle Guinée. Ann. Soc. ent. Belg. Brussels 63 1923 pp. 95-112.

**1389.—Lestage**, J. A. Notes critiques sur les *Campsurus* (Ephemeroptera). Ann. Soc. ent. Belg. Brussels 63 1923 pp. 113-124.

**1390.—Lestage**, J. A. Notes sur quelques Névroptères-Planipennes à larve primitive (Polystoechotidae), ou mélolonthoïde (Ithonidae), et sur un Panorpate à larve aquatique (*Nannochorista*). Bull. Soc. ent. Belg. Brussels 5 1923 pp. 43-46.

**1391.—Lestage**, J. A. Nouvelles stations de *Tortosa belgica* Lest. (Ephémère). Bull. Soc. ent. Belg. Brussels 5 1923 pp. 51-52.

**1392.—Lestage**, J. A. La présence de *Nephelopteryx nebulosa* L. en Espagne et sa date d'apparition. Bull. Soc. ent. Belg. Brussels 5 1923 pp. 55-57. [Plecop.]

**1393.—Lestage**, J. A. La persistance des trachéo-branchies larvaires chez les Perlides adultes. Bull. Soc. ent. Belg. Brussels 5 1923 pp. 63-78. [Plecop.]

**1394.—Lestage**, J. A. Les *Nosybus* africains (Planipennes). Rev. zool. afr. Brussels 11 1923 pp. 182-191 2 figs.

**1395.—Lestage**, J. A. Les *Cleon* africains (Ephémères) et description d'une espèce nouvelle du Congo belge. Rev. zool. afr. Brussels 11 1923 pp. 192-195 1 fig.

**1396.—Lestage**, J. A. Une Planipenne nouveau du Congo belge (*Micromus weryae*). Rev. zool. afr. Brussels 11 1923 pp. 196-197.

**1397.—Lestage**, J. E. Etude des Ephémères du Congo belge. I. Notes sur *Eatonica schoutedeni* Nav. Rev. zool. afr. Brussels 11 1923 pp. 301-307.

**1398.—Lestage**, J. A. Catalogue des Ephémères de France. Ann. Soc. ent. France Paris 91 1923 pp. 273-276.

**1399.—Ley**, R. Description de la femelle de *Sphodroxia algerica* Ley et d'une espèce nouvelle de *Sphodroxia* du Maroc (Col. Melolonthidae). Bull. Soc. ent. France Paris 1923 pp. 127-128.

**1400.—Ley**, R. Description d'une espèce nouvelle du genre *Ancistrosoma* Curtis et observations sur diverses espèces de ce genre (Col. Melolonthidae). Bull. Soc. ent. France Paris 1923 pp. 221-223.

**1401.—Lichtenstein**, J. L. & **Rabaud**, E. Le comportement des *Polysphincta*, Ichneumonides parasites des Araignées. Trav. Inst. Zool. Univ. Montpellier Cette (2) Mém. 33 [31 ?] 1923 pp. 267-287 11 figs.

**1402.—Lindberg**, H. Anteckningar om fynd av Hemiptera Heteroptera i Sverige sommaren 1922. Ent. Tidskr. Stockholm 44 1923 pp. 180-186.

**1403.—Lindberg**, H. Ueber die Gattung *Coriomeris* Westw. (Hem. Het.). Ann. hist.-nat. Mus. Natnl. Hung. Budapest 20 1923 pp. 73-80 5 figs.

**1404.—Lindberg**, H. Zur Kenntnis der paläarktischen Cicadina I. Cercopidae. Notulae ent. Helsingfors 3 1923 pp. 34-43 7 figs. [Hom.]

1405.—Lindberg, H. Zur Kenntnis der Cicadinengattung *Batracomorphus* Lew. Notulae ent. Helsingfors 3 1923 pp. 68–71 2 figs. [Hom.]

Lindemans see Jurriaanse & Lindemans.

1406.—Lindner, E. Diptera. Biol. Tiere Deutschlands. Berlin, Borntraeger 1923 Teil 38 40 pp. 36 figs.

1407.—Lindsey, A. W. Notes on Distribution. Lepidopterist Salem 2 1918 pp. 30–31, 37–38.

1408.—Lindsey, A. W. New names in the order of Lepidoptera. Ent. News Philadelphia 34 1923 p. 123.

1409.—Lindsey, A. W. On the authorship of the Encyclopédie Méthodique, Vol. ix. A Correction (Lepid.). Ent. News Philadelphia 34 1923 pp. 123–124.

1410.—Lindsey, A. W. New North American Hesperiidae (Lepid.). Ent. News Philadelphia 34 1923 pp. 209–210.

1411.—Lindsey, A. W. The egg and larva of *Hesperia juba* Bdv. J. Sci. Lab. Denison Univ. Granville Ohio 20 1923 pp. 121–129 1 pl. [Lep.]

1412.—Lindsey, A. W. Iowa Microlepidoptera. Proc. Iowa Acad. Sci. Des Moines 29 1923 pp. 157–161.

1413.—Little, C. C. & Jones, E. E. The effect of selection upon a Mendelian ratio. Genetics Menasha Wis. 8 1923 pp. 1–26 20 figs. [Dipt.]

1414.—Littlewood, F. Notes on forcing larvae of *Macrothyacia (Bombyx) rubi*. Entomologist London 56 1923 pp. 28–33, 226–227. [Lep.]

1415.—Littlewood, F. Forcing Noctuid caterpillars in the winter. Vascular Newcastle 9 1923 pp. 110–111. [Lep.]

Locket, G. H. see O'Hea & Locket.

1416.—Loewenthal, H. Cytologische Untersuchungen an normalen und experimentell beeinflussten Dipteren (*Calliphora erythrocephala*). Arch. Zellforschg. Leipzig 17 1923 pp. 86–101 10 figs.

1417.—Logier, S. An interesting ant from Muskoka. Canad. Ent. Orillia 55 1923 pp. 247–249.

(N-12519 j) Q

1418.—Łomnicki, J. Sur un cas d'amblypygie chez *Melolontha melolontha* Linné. Polskie Pismo Ent. Lemberg 2 1923 pp. 1–2 1 fig. [Col.]

1419.—Łomnicki, J. *Athous mokrzecki* nov. sp. (Coleopt. Elateridae). Polskie Pismo Ent. Lemberg 2 1923 pp. 53–54.

1420.—Lona, C. *Otiorrhynchus schaubergeri* nov. spec. (Col. Curcul.). Wien. ent. Ztg. 40 1923 p. 64.

1421.—Lona, C. Descrizione di un nuovo *Otiorrhynchus*. Boll. Soc. ent. ital. Genoa 55 1923 pp. 82–83. [Col.]

Long, F. L. see Clements & Long.

Lott, R. B. see Weiss & Lott.

1422.—Loveridge, A. Notes on the Driver-ant *Dorylus nigricans* Illig., at Kilosa, Tanganyika Territory. Trans. Ent. Soc. London 1922 1923 pp. xxxii–xlvi. [Hym.]

1423.—Loveridge, A. Notes on East African Insects collected 1915–1922. Proc. Zool. Soc. London 1923 pp. 1013–1041. [General.]

1424.—Lower, O. B. Descriptions of new Australian Lepidoptera. Trans. R. Soc. S. Aust. Adelaide 47 1923 pp. 54–57.

1425.—Lucas, R. Pompiliden-Studien, I. Arch. Natg. Berlin Abt. A 83 Heft 5 (1917) 1919 pp. 1–180 3 pls. [Hym.]

1426.—Lucas, R. Pompiliden-Studien, II. Die Gattung *Macromeris*. Arch. Natg. Berlin 85 Abt. A Heft 10 (1919) 1920 pp. 132–162 pls. [Hym.]

1427.—Lucas, W. J. Notes on British Paraneuroptera (Odonata) in 1922. Entomologist London 56 1923 pp. 131–134.

1428.—Lucas, W. J. Notes on British Neuroptera (including Megaloptera & Mecoptera) in 1922. Entomologist London 56 1923 pp. 219–221.

1429.—Lucas, W. J. Odonata of the Lancashire & Cheshire District. Lancs. Ches. Nat. Darwen 12 1919 pp. 55–60 1 fig.

1430.—Lucas, W. J. *Leucorrhinia dubia*, Vanderlinde. Lancs. Ches. Nat. Darwen 13 1920 pp. 12–17 1 pl. [Odon.]

1431.—Lucas, W. J. Labium (second maxillae) of the Paraneuroptera (Odonata). Proc. S. London Ent. & Nat. Hist. Soc. 1922–23 1923 pp. 57–63 2 pls.

1432.—Luederwaldt, H. & Fonseca, J. P. da. A Ilha dos Alcatrazes. Rev. Mus. São Paulo 13 1923 pp. 439–513 1 map. [General.]

1433.—Luigioni, P. Le specie e le varietà del gen. *Pachypus* Serv. in Italia (Coleoptera : fam. Scarabaeidae). Mem. Soc. ent. ital. Genoa 2 1923 pp. 50–64.

1434.—Luigioni, P. L'identità specifica dell' *Ophonus zigzag* Costa (Coleoptera, Carabidae). Ann. Mus. zool. R. Univ. Naples N.S. 5 1923 no. 5 2 pp.

1435.—Luigioni, P. Contributo allo studio della fauna entomologica Italiana. Coleotteri nuovi o poco noti per il Lazio. V–VII. Atti Pont. Accad. Nuovi Lincei Rome 76 1923 pp. 46–63, 78–85, 132–145, 160–177.

1436.—Luja, E. Termitières et fourmilières du Congo au Musée d'Histoire naturelle de Luxembourg. Bull. Soc. Nat. Luxembourg 29 1919 pp. 178–186.

1437.—Lundbeck, W. Some remarks on the biology of the Sciomyzidae together with the description of a new species of *Ctenulus* from Denmark (Dipt.). Vidensk. Medd. Copenhagen 76 1923 pp. 101–109 4 figs.

1438.—Lundblad, O. Anteckningar om våra vattenhemipterer, iii. Ent. Tidskr. Stockholm 43 1922 pp. 139–170; 44 1923 pp. 57–106 6 figs. [Hem.]

1439.—Lundblad, O. Studies on the aquatic Rhynchota. What is the systematic range of *Arctocoris pro-minula* (Thoms.)? Ann. Biol. lacustre Brussels 12 1923 pp. 305–317 17 figs. [Heterop.]

Lundblad, O. see Sellman & Lundblad.

Lundström, C. see Poppius, Lundström & Frey.

1440.—Lütkenmeyer, W. *Parn. nordmanni duplicatus* (Lütkenmeyer) n. var. Ent. Zs. Frankfort o. M. 37 1923 p. 26. [Lep.]

1441.—Lyle, G. T. New parasitic Hymenoptera. Ann. Mag. Nat. Hist. London (9) 12 1923 pp. 337–339.

1442.—Lyle, G. T. Contributions to our knowledge of the British Braconidae. Entomologist London 56 1923 pp. 147–149, 228–229, 252–254. [Hym.]

1443.—McAtee, W. L. Descriptions of *Bibio* (Diptera) from the Carolinas. Proc. Ent. Soc. Washington 25 1923 pp. 62–64.

1444.—McAtee, W. L. Insects, Arachnids and Chilopods of the Pribilof Islands, Alaska: Apterygota; Anoplura; Heteroptera. North Amer. Fauna Washington D.C. no. 46 1923 pp. 139, 142, 145.

1445.—McAtee, W. L. A new species of *Otiocerus* (Homoptera; Fulgoridae). Proc. Biol. Soc. Washington 36 1923 pp. 45–47.

1446.—McAtee, W. L. & Malloch, J. R. Further notes on names of Emesinae and other Rhynchota. Proc. Biol. Soc. Washington 36 1923 pp. 161–163.

1447.—McAtee, W. L. & Malloch, J. R. Notes on American Bactrodinae and Saicinae (Heteroptera: Reduviidae). Ann. Ent. Soc. Amer. Columbus Ohio 16 1923 pp. 247–253 1 pl.

McAtee, W. L. see Malloch & McAtee.

1448.—McDunnough, J. New Canadian Ephemeridae with notes. Canad. Ent. Orillia 55 1923 pp. 39–50 3 figs. [Ephem.]

1449.—McDunnough, J. Notes on Pterophoridae with descriptions of new species. Canad. Ent. Orillia 55 1923 pp. 85–87. [Lep.]

1450.—McDunnough, J. New Canadian Lepidoptera. Canad. Ent. Orillia 55 1923 pp. 163–168.

1451.—McDunnough, J. Notes on the identity of *Sphinx vancouverensis*, Edw. (Lepid.). Canad. Ent. Orillia 55 1923 pp. 147–148.

1452.—Mace, H. Some African butterflies. Sci. Progress London 16 1923 pp. 620–627. [Lep.]

1453.—Mace, H. & Gosh, C. C. The Evolution of the Caterpillar. Sci. Progress London 17 1923 pp. 619–629; 18 p. 287. [Lep.]

1454.—Macfie, J. W. S. & Ingram, A. The early stages of West African mosquitos, vi. Bull. Ent. Res. London 13 1923 pp. 409–442 25 figs.

Macfie, J. W. S. see Ingram & Macfie.

1455.—MacGill, E. I. The life-history of *Aphidius avenae* (Hal.), a Braconid parasitic on the nettle *Aphis (Macrosiphum urticae)*. Proc. R. Soc. Edinburgh 43 1922–23 pp. 51–71 13 figs. [Hym.]

1456.—MacGillivray, D. Lets over het Subgenus *Macrocorixa*. Ent. Ber. Ned. Ent. Vereen. The Hague 6 1923 pp. 129–131. [Heterop.]

1457.—MacGillivray, A. D. Quarter Century of species of *Tenthredo* (Hym.). J. New York Ent. Soc. 31 1923 pp. 107–116.

1458.—MacGillivray, A. D. Sawflies of the Katmai Expedition to Alaska. J. New York Ent. Soc. 31 1923 pp. 163–171. [Hym.]

1459.—MacGillivray, A. D. The subcostal vein in the wings of insects. Amer. Nat. New York 57 1923 pp. 371–374.

1460.—MacGillivray, A. D. The anal veins in the wings of Diptera. Ent. News Philadelphia 34 1923 pp. 106–111.

1461.—MacGillivray, A. D. Species of *Dolerus* from Oregon (Hymenoptera, Tenthredinidae). Insec. Insc. Menst. Washington D.C. 11 1923 pp. 31–35.

1462.—MacGillivray, A. D. New sawflies (Hymenoptera) from Oregon. Psyche Boston Mass. 30 1923 pp. 77–81.

1463.—MacGillivray, A. D. New Western Species of *Dolerus* (Tenthredinidae, Hymenoptera). Canad. Ent. Orillia 55 1923 pp. 65–68.

1464.—MacGillivray, A. D. Sawflies from Alberta (Tenthredinidae). Canad. Ent. Orillia 55 1923 pp. 158–162. [Hym.]

1465.—MacGillivray, A. D. New species of Tenthredinidae from the East and middle West. Bull. Brooklyn Ent. Soc. 18 1923 pp. 53–56. [Hym.]

1466.—MacGillivray, A. D. External Insect Anatomy : A Guide to the Study of Insect Anatomy and an Introduction

to Systematic Entomology. Urbana Ill. Scarab Co. viii + 388 pp. 1923. [Not seen.]

1467.—MacGregor, M. E. & Gébert, S. The larva and pupa of *Orthopodomyia arboricollis*, d'Emmerez de Charmoy, 1908. Bull. Ent. Res. London 13 1923 pp. 449–452 1 pl.

1468.—Machulka, V. De novis faunae bohemicae Coleopteris. Bul. Sect. ent. Mus. Nat. Prague 1 1923 pp. 70–71 1 fig.

1469.—Machulka, V. Fauna Bohemica. Časopis Českoslov. Společ. Ent. Prague 20 1923 pp. 73–74. [Col.]

1470.—McIndoo, N. E. Glandular structure of the abdominal appendages of a termite guest (*Spirachtha*). Zoologica New York 3 1923 pp. 367–381 2 pl. 1 fig. [Col.]

1471.—McKeown, K. Notes on the habits of (*Lestis bombylans*) the carpenter bee of the grass-trees. Austr. Nat. Sydney 4 1918 pp. 21–25.

1472.—Maheux, G. Provancher, the Canadian Linnaeus—his life and works. 53rd Ann. Rept. Ent. Soc. Ontario 1922 1923 pp. 28–30.

1473.—Maidl, F. Beiträge zur Hymenopterenfauna Dalmatiens, Montenegros und Albaniens. Ann. Nat. Hist. Mus. Vienna 36 1923 pp. 25–35 4 figs.

1474.—Main, H. Notes on the metamorphoses of *Onthophagus taurus* L. Trans. Ent. Soc. London 1922 1923 pp. xiv–xvi 1 pl. [Col.]

1475.—Malan, D. E. Ergebnisse anatomischer Untersuchungen an Standfuss'schen Lepidopteren - Bastarden. Mitt. Entomologia Zürich 4 1918 pp. 201–260 6 figs. 4 pls. [Lep.]

1476.—Mallet, P. M. Étude du genre *Chrysomela*: Faune Corso-Sarde. Misc. ent. Castanet-Tolosan 27 1923 pp. 9–11 12 figs. [Col.]

1477.—Malloch, J. R. Notes on Australian Diptera with descriptions. Proc. Linn. Soc. N.S.W. Sydney 48 1923 pp. 601–622.

1478.—Malloch, J. R. A new species of *Forcipomyia* from the eastern United States (Diptera, Ceratopogonidae). Ent. News Philadelphia 34 1923 pp. 4–5.

1479.—Malloch, J. R. A new Empid from the eastern United States (Diptera). Ent. News Philadelphia **34** 1923 p. 5.

1480.—Malloch, J. R. A new character for differentiating the families of Muscoidea (Dipt.). Ent. News Philadelphia **34** 1923 pp. 57–58.

1481.—Malloch, J. R. The Cordylurid genus *Paralleloma* and its nearest allies (Dipt.). Ent. News Philadelphia **34** 1923 pp. 139–140, 175–180.

1482.—Malloch, J. R. A note on the relationship of Pyrgotidae (Diptera). Ent. News Philadelphia **34** 1923 p. 283.

1483.—Malloch, J. R. A new North American species of the genus *Beckerina* (Phoridae, Diptera). Bull. Brooklyn Ent. Soc. **18** 1923 pp. 32–33.

1484.—Malloch, J. R. The North American species of the Chloropid genus *Cetema* (Diptera). Bull. Brooklyn Ent. Soc. **18** 1923 p. 33.

1485.—Malloch, J. R. A new genus of Phoridae (Diptera). Bull. Brooklyn Ent. Soc. **18** 1923 pp. 143–144.

1486.—Malloch, J. R. Some new genera and species of Lonchaeidae and Sarcophagidae (Diptera). Proc. Ent. Soc. Washington **25** 1923 pp. 45–53.

1487.—Malloch, J. R. Expedition of the California Academy of Sciences to the Gulf of California in 1921. Anthomyidae and Lonchaeidae (Kelp flies and their allies). Proc. Cal. Acad. Sci. San Francisco 4th Ser. **12** 1923 pp. 425–428. [Dipt.]

1488.—Malloch, J. R. An amended synopsis of the genus *Mydaea* (Diptera, Anthomyiidae). Canad. Ent. Orillia **55** 1923 pp. 220–221.

1489.—Malloch, J. R. Insects, Arachnids and Chilopods of the Pribilof Islands, Alaska: Diptera. North Amer. Fauna Washington D.C. no. **46** 1923 pp. 170–227 2 pls.

1490.—Malloch, J. R. Exotic Muscaridae (Diptera). IX–XI. Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 664–675; **12** 1923 pp. 177–194 & 505–528.

1491.—Malloch, J. R. & McAtee, W. L. District of Columbia Diptera: Sciaridae. Ent. News Philadelphia **34** 1923 pp. 231–234.

Malloch, J. R. see McAtee & Malloch.

1492.—Mallock, A. Expansion of the wings of Lepidoptera after emergence from the chrysalis. Nature London **112** 1923 pp. 7–8 9 figs.

1493.—Malyshev, S. La nidification des *Colletes* Latr. (Hymenoptera, Apoidea). [In Russian.] Rev. russe Ent. Petrograd **18** 1923 pp. 103–124 7 figs.

1494.—Mank, H. G. The biology of the Staphylinidae. Ann. Ent. Soc. Amer. Columbus Ohio **16** 1923 pp. 220–237 6 figs. [Col.]

1495.—Mann, M. C. The occurrence and hereditary behaviour of two new dominant mutations in an inbred strain of *Drosophila melanogaster*. Genetics Menasha Wis. **8** 1923 pp. 27–36. [Dipt.]

1496.—Mann, W. M. Two new ants from Bolivia. Psyche Boston Mass. **30** 1923 pp. 13–18 2 figs. [Hym.]

1497.—Mann, W. M. New genera and species of termitophilous Coleoptera from northern South America. Zoologica New York **3** 1923 pp. 323–366 13 figs.

1498.—Mann, W. M. Two Serphoid guests of *Ectiton* (Hym.). Proc. Ent. Soc. Washington D.C. **25** 1923 pp. 181–182 1 fig.

1499.—Mansbridge, W. List of Lepidoptera of Lancashire and Cheshire (cont.). Ann. Rep. & Proc. Lancs. Ches. Ent. Soc. Liverpool **42–44** (1918–20) 1921 pp. 69–84; **45–46** (1921–22) 1923 pp. 85–100 sep. pag.

1500.—Marchand, W. The larval stages of *Limnephora discreta*, Stein (Diptera, Anthomyidae). Bull. Brooklyn Ent. Soc. **18** 1923 pp. 58–62 1 fig.

1501.—Marcovitch, S. Plant lice and light exposure. Science New York **58** 1923 pp. 537–538. [Hom.]

1502.—Marcovitch, S. A root weevil (*Stephanocleonus plumbeus* Lec.) reared from strawberry. Canad. Ent. Orillia **55** 1923 pp. 218. [Col.]

**1503.**—**Marcus, E.** Studien zur Kenntnis der coprophagen Lamellicornia. Untersuchungen über System, Morphologie, Phylogenetis und Verbreitung der *Proagoderus* auf Grund des Materials des Zoologischen Museums zu Berlin. Arch. Natg. Berlin Abt. A **83** Heft 10 (1917) 1919 pp. 1–122 12 pls. [Col.]

**1504.**—**Maréchal, P.** Note sur l'état larvaire et l'état nymphal de *Chrysis ignita* L. Bull. Soc. ent. Belg. Brussels **5** 1923 pp. 103–107. [Hym.]

**1505.**—**Marshall, G. A. K.** On new Curculionidae from South Africa. Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 531–552 1 pl. [Col.]

**1506.**—**Marshall, G. A. K.** On new species of *Brachycerus* from South and East Africa (Col., Curculionidae). Ann. Mag. Nat. Hist. London (9) **12** 1923 pp. 113–130 7 figs.

**1507.**—**Marshall, G. A. K.** On new species of Curculionidae from India (Coleoptera). Ann. Mag. Nat. Hist. London (9) **12** 1923 pp. 281–300 1 pl.

**1508.**—**Marshall, G. A. K.** Three new species of Curculionidae from Java. Treubia Buitenzorg **3** 1923 pp. 267–271. [Col.]

**1509.**—**Martin, R.** Sur les Odonates du Chili. Rev. chil. Hist. nat. Santiago **25** (1921) 1923 pp. 19–25 1 fig.

**1510.**—**Martini, E.** *Anopheles* in der näheren und weiteren Umgebung von Hamburg und ihre voraussichtliche Bedeutung für die Volksgesundheit. Abh. natw. Ver. Hamburg **21** 1920 Heft 2 pp. 32 4 pls. [Dipt.]

**1511.**—**Martini, E.** Über einige für das System bedeutungsvolle Merkmale der Stechmücken. Zool. Jahrb. Jena Abt. Syst. **46** 1923 pp. 517–590 figs. [Dipt.]

**1512.**—**Martini, E. & Burgarth, H.** Die Anatomie des weiblichen Hundeflohs als Beweis für die stammesgeschichtliche Herkunft der Flöhe. Centralbl. Bakt. Jena 1 Abt. **90** pp. 29–38. [Siphonapt.]

**1513.**—**Mas de Xaxars, J. M.** Dues formes de *Carabus rugosus* F. Butll. Inst. catalana Hist. nat. Barcelona (2) **1** 1921 pp. 74–75. [Col.]

**1514.**—**Masi, L.** Un nuovo Eupelmino, supposto femmina, di *Chirolophus* (Hym. Chalcididae). Boll. Soc. ent. ital. Genoa **55** 1923 pp. 9–11.

**1515.**—**Masi, L.** Reperti di Chalcididae (Hym.) rare o poco note. Boll. Soc. ent. ital. Genoa **55** 1923 pp. 11–13.

**1516.**—**Maslowsey, L. & M.** Biologisches über *Lycaena eumedon* Esp. Polskie Pismo Ent. Lemberg **2** 1923 pp. 24–30 4 figs. [Lep.]

**1517.**—**Maslowsey, L. & M.** Neue Formen der Grossschmetterlinge. Polskie Pismo Ent. Lemberg **2** 1923 pp. 124–135 3 pls. [Macrolep.]

**1518.**—**Mason, A. C.** Relation of environmental factors to wing development in Aphids. Florida Ent. Gainesville **6** 1923 pp. 25–32; **7** 1923 1–7. [Hom.]

**Mason, E. D.** see Metz, Moses & Mason.

**1519.**—**Mason, P. W.** The raspberry cane Aphid (Hom.). Proc. Ent. Soc. Washington D.C. **25** 1923 pp. 188–190.

**1520.**—**Mast, S. O.** Photic orientation in Insects with special reference to the drone-fly, *Eristalis tenax* and the robber-fly, *Erax rufibarbis*. J. Exptl. Zool. Philadelphia **38** 1923 pp. 109–205 13 figs. 1 table. [Dipt.]

**1521.**—**Mast, S. O.** Photic orientation in insects. Proc. Nat. Acad. Sci. Washington **8** 1922 pp. 240–245.

**1522.**—**Matheson, R.** The wax secreting glands of *Pseudococcus citri*, Riss. Ann. Ent. Soc. Amer. Columbus Ohio **16** 1923 pp. 50–56 2 pls. [Hom.]

**1523.**—**Matheson, R. & Shannon, R. C.** The Anophelines of northeastern America (Diptera, Culicidae). Insec. Insc. Menst. Washington D.C. **11** 1923 pp. 57–64 2 pls.

**1524.**—**Maulik, S.** New Cryptostome Beetles. Proc. Zool. Soc. London **1923** pp. 599–608 8 figs. [Col.]

**1525.**—**Mavor, J. W.** An effect of X-rays on the linkage of Mendelian characters in the first chromosome of *Drosophila*. Genetics Menasha Wis. **8** 1923 pp. 355–366.

1526.—Mavor, J. W. & Svenson, H. K. X-rays and crossing-over. Science, New York, **58** 1923, pp. 124–126 fig. [Dipt.]

1527.—Maxson, A. C. Hemiptera of Connecticut: Aphididae. Subfamily Pemphiginae. Conn. N. H. Surv. Hartford Bull. **34** 1923 pp. 311–328, 4 figs.

1528.—Mayer, J. & Schulthess, A. v. Beobachtungen an Nestern von geselligen und solitären Wespen. Mitt. Entomologia Zürich **6** 1923 pp. 357–367, 1 fig. 1 pl. [Hym.]

1529.—Mayfield, T. D. A new form of *Catocala gracilis* Edwards. Bull. Brooklyn Ent. Soc. **18** 1923 p. 33. [Lep.]

1530.—Meade-Waldo, G. Hymenoptera, fam. Apidae, subfam. Prosopidinae. Gen. Ins., Brussels fasc. **181** 1923 pp. 1–45, 1 pl.

1531.—Mecke, C. *Colias myrmidone* und Hybrid *myrmidone* ♂ × *hyale* ♀ in Ostpreussen. Intern. ent. Zs., Guben **16** 1923 pp. 173–175. [Lep.]

1532.—Meess, A. Die cecidogenen und cecidocolen Lepidopteren, gallenerzeugende und gallenbewohnende Schmetterlinge und ihre Cecidien. Zoologica, Stuttgart **24** 1923, Heft 61, pp. 499–584, 13 pls.

1533.—Meijere, J. C. H. de. *Ceratopogon*-Arten als Ectoparasiten anderer Insekten. Tijdschr. Ent., The Hague **66** 1923 pp. 137–142, 2 figs. [Dipt.]

1534.—Meissner, O. Zur Biologie von *Myrmeleon formicarius* L. Ent. Zs., Frankfort o. M. **37** 1923 p. 34. [Neur.]

1535.—Melander, A. L. The genus *Cyrtopogon* (Diptera: Asilidae). Psyche Boston Mass. **30** 1923 pp. 102–119, 135–145.

1536.—Melander, A. L. Studies in Asilidae (Diptera). Psyche Boston Mass. **30** 1923 pp. 207–219.

1537.—Melichar, L. Neue Cercopidenarten. Verh. zool.-bot. Ges. Wien **65** 1915 pp. 1–16 1 fig. [Hom.]

1538.—Melichar, L. Die Gattung *Rhytiirrhinus* Schönh. und die verwandten Gattungen *Entomoderus* Raff.

und *Ereminarius* Fairm. (Circ.) Časopis Českoslov. Spolec. Ent., Prague **20** 1923 pp. 29–53, 1 pl. [Col.]

1539.—Melichar, L. Zwei neue Cicadinen von den Philippinen. Wiener ent. Ztg. **40** 1923 p. 100. [Hom.]

1540.—Melichar, L. Die Gattung *Makilingia* Bak. (Homopt.). Wiener ent. Ztg. **40** 1923 pp. 117–120.

1541.—Melichar, L. Homoptera, fam. Acanaloniidae, Flatidae et Ricanidae. Gen. Ins., Brussels fasc. **182** 1923 pp. 1–185, 2 pls.

1542.—Melin, D. Contributions to the knowledge of the biology, metamorphosis and distribution of the Swedish Asilids in relation to the whole family of Asilids. Zool. Bidrag. Uppsala **8** 1923 pp. 1–317, 305 figs. [Dipt.]

1543.—Mell, R. Noch unbeschriebene Lepidopteren aus Südchina. II. D. ent. Zs. Berlin **1923** pp. 153–160.

1544.—Mell, R. Über südchinesische Arbeliden und Verwandte. D. ent. Zs. Berlin **1923** pp. 160–167. [Lep.]

1545.—Melzer, J. Longicorneos (Col.) do Brasil novos ou pouco conhecidos. Not. prel. Rev. Mus. Paul., S. Paulo 2 no. 5 1923 9 pp.

1546.—Melzer, J. Longicorneos do Brasil novos ou pouco conhecidos. Rev. Mus. Paul., São Paulo **13** 1923 pp. 529–535, 1 pl. [Col.]

1547.—Menozzi, C. Mirmecofili raccolti a Sambiase di Calabria. Boll. Soc. ent. ital. Genoa **55** 1923 pp. 72–80.

1548.—Menozzi, C. Trois Fourmis nouvelles (Hym.) Bull. Soc. ent. France Paris **1923** pp. 209–212 2 figs.

1549.—Méquignon, A. Etude synonymique sur les Melasidae (Coléoptères). Ann. Soc. ent. France, Paris **91** 1923 pp. 369–374.

1550.—Mercet, R. G. Adiciones a la fauna española de Encirtidos. 1<sup>a</sup> nota. Bol. R. Soc. esp. Hist. nat. Madrid **22** (1922) 1923 pp. 474–481, figs.; **23** 1923 pp. 49–56 & 174–179, figs. [Hym.]

1551.—Mercet, R. G. Encirtidos de Canarias. Bol. R. Soc. esp. Hist. nat. Madrid **23** 1923 pp. 138–145 figs. [Hym.]

1552.—**Mercet**, R. G. Encirtidos de Europa Central, nuevos o poco conocidos (2<sup>a</sup> nota). Bol. R. Soc. esp. Hist. nat. Madrid **23** 1923 pp. 286–292 figs. [Hym.]

1553.—**Mercet**, R. G. Una especie nueva del genere *Azotus*. Bol. R. Soc. esp. Hist. nat. Madrid **23** 1923 pp. 410–413, figs. [Hym.]

1554.—**Mercet**, R. G. Los Calcídidos parásitos de orugas. Rev. Fitopatología Madrid **1** 1923 pp. 12–19 1 fig. [Hym.]

1555.—**Mercet**, R. G. Cóccidos de la encina. *Asterolecanium ilicicola* Targioni. Rev. Fitopatología Madrid **1** 1923 pp. 54–61, 2 figs. [Hom., Hym.]

1556.—**Mercet**, R. G. Un parasito de *Tortrix viridana* y una especie nueva de *Eutelus*. Rev. Fitopatología, Madrid **1** 1923 pp. 100–107, 4 figs. [Hym.]

1557.—**Mercier**, L. Diptères de la Côte du Calvados, IVme liste. (Avec la description de deux espèces nouvelles et d'une variété nouvelle de Chironomides marins par J. J. Kieffer). Ann. Soc. ent. Belg., Brussels **63** 1923 pp. 9–20, 5 figs.

1558.—**Mercier**, L. & **Poisson**, R. Contribution à l'étude de l'atrophie des ailes et des muscles du vol chez les Forficulidae. C.R. Acad. Sci. Paris **177** 1923 pp. 1142–1145, 3 figs.

**Mercier**, L. see Cuénnot & Mercier; also Lesne & Mercier.

1559.—**Merrill**, G. B. A new scale insect from Florida. (Order: Hemiptera. Family: Coccoidae.) Qtrly. Bull. Florida State Pl. Bd. Gainesville **7** 1923 pp. 167–168 2 figs.

1560.—**Mertens**, H. Biologische und morphologische Untersuchungen an Plekopteren. Arch. Natg., Berlin Abt. A. **89** 1923 Heft 2 pp. 1–38, 18 figs.

1561.—**Metcalf**, Z. P. A key to the Fulgoridae of Eastern North America with descriptions of new species. J. Elisha Mitchell Sci. Soc. Chapel Hill, N.C. **38** 1923 pp. 139–230, 33 pls. [Hom.]

**Metcalf**, J. W. see Pierce & Metcalf.

1562.—**Metz**, C. W. & **Ferry**, R. M. The parallel characters "crossveinless" and "vermilion" in *Drosophila willistoni*. Amer. Nat. New York **57** 1923 pp. 381–384.

1563.—**Metz**, C. W. & **Moses**, M. S. Chromosomes of *Drosophila*. Chromosome relationship and genetic behaviour in the genus *Drosophila*. J. Heredity Baltimore **14** 1923 pp. 195–204 5 figs.

1564.—**Metz**, C. W., **Moses**, M. S. & **Mason**, E. D. Genetic studies on *Drosophila virilis* with considerations on the genetics of other species of *Drosophila*. Carnegie Inst. Washington Pubn. **328** 1923 94 pp. 5 pls. 17 figs. 79 tables. [Dipt.]

1565.—**Metz**, C. W. & **Nonidez**, J. F. Spermatogenesis in *Asilus notatus* Wied. (Diptera). Arch. Zellsforschg. Leipzig **17** 1923 pp. 438–449 3 pls. 1 fig.

**Metz**, C. W. see Ferry, Lancefield & Metz.

1566.—**Meunier**, F. Sur quelques insectes de l'Aquitanien de Rott (Sept-Monts, Rhénanie). Misc. ent. Castanet-Tolosan **26** 1923 pp. 82–87 2 pls. 7 figs.

1567.—**Meunier**, F. Nouvelle contribution à la monographie des Mycetophilidae (Ceroplatinae, Mycetophilinae et Sciophilinae) de l'ambre de la Baltique. Rev. sci. Bourbonn., Moulins 1923 pp. 14–34 6 figs. [Dipt.]

1568.—**Meyer**, E. Beobachtungen und Versuche an paläarktischen Honigameisen. Biol. Zentralbl. **43** 1923 pp. 353–404. [Hym.]

1569.—**Meyer**, R. Apidae-Halictinae I. Gatt. *Parasphecodes*. Arch. Naturg. Berlin **85** Abt. A. Heft 11 (1919) 1920 pp. 112–137. [Hym.]

1570.—**Meyer**, R. Apidae-Sphecodinae. Arch. Naturg., Berlin **85** Abt. A. Hefte 1 & 2 1919 (1920) pp. 79–242. [Hym.]

1571.—**Meyer**, R. Die parasitischen Hymenopteren der Fritfliege (*Oscinosoma frit*, L.). Zs. angew. Ent., Berlin **9** 1923 pp. 111–120.

1572.—**Meyer**, R. Beitrag zur Biologie mazedonischer Hymenopteren. Zs. wiss. Insektenbiol., Berlin **38** 1923 pp. 34–36.

- 1573.—Meyrick, E. New Microlepidoptera. *Zool. Med.*, Leiden **6** 1921 pp. 145–202.
- 1574.—Meyrick, E. Exotic Microlepidoptera ii pt. 20, pp. 609–640. Marlborough 1923.
- 1575.—Meyrick, E. Three new Microlepidoptera from Cyprus. *Entomologist London* **56** 1923 pp. 277–278.
- 1576.—Meyrick, E. Descriptions of New Zealand Lepidoptera. *Trans. N.Z. Inst. Wellington* **54** 1923 pp. 162–169.
- 1577.—Mickel, C. E. Preliminary notes on the Mutilidae of Minnesota with descriptions of three new species. *Nineteenth Report Minnesota State Ent. St. Paul* 1923 pp. 97–113. [Hym.]
- 1578.—Miller, D. A new Tachinid genus and two new species. *Trans. N. Z. Inst. Wellington* **54** 1923 pp. 432–436 1 pl. 4 figs. [Dipt.]
- 1579.—Miller, D. Material for a monograph on the Diptera fauna of New Zealand: Part III—Family Empididae. *Trans. N. Z. Inst. Wellington* **54** 1923 pp. 437–464 68 figs.
- 1580.—[Miller, E. E.] Миллер, Е. Э. Lépidoptères, rapportés des environs de Kagysman dans le district de Cars. *Bull. Soc. ent. Moscou* **2** no. 2 1923 pp. 81–118. [In Russian.]
- 1581.—Minck, P. Beitrag zur Kenntnis der Dynastiden (Col.). *Arch. Natg. Berlin Abt. A* **83** Heft 2 (1917) 1919 pp. 37–67 19 figs. 2 maps.
- 1582.—Minck, P. Beitrag zur Kenntnis der Dynastiden. 10. Asiatische Xylotrupiden. *Arch. Natg. Abt. A* **84** Heft 8 (1918) 1920 pp. 194–221 figs. [Col.]
- 1583.—Minck, P. Documenta Scarabaei nasicornis L. Scarabaeorumque veterum. Wiedergabe der Originaltextstellen alter Werke der Zeit von Linné als Beitrag zur Geschichte der Entomologie und ihrer Literatur. *Arch. Natg. Berlin* **85** Abt. A Heft 4 (1919) 1920 pp. 88–114 figs. [Col.]
- 1584.—Mitterberger, K. Die Nahrungspflanzen der heimischen Coleophora-Arten. *Arch. Natg. Berlin Abt. A* **83** Heft 6 (1917) 1919 pp. 55–75. [Lep.]
- 1585.—Mohr, E. Biologisches über *Lepisma saccharina* L. *Zool. Anz.* Leipzig **56** 1923 pp. 174–181 fig. [Thysanura.]
- 1586.—Mohr, O. L. Das Deficiency-Phänomen bei *Drosophila melanogaster*. *Zs. indukt. Abstammungslehre Berlin* **30** 1923 pp. 279–283. [Dipt.]
- 1587.—Mohr, O. L. A somatic mutation in the singed locus of the x-chromosome in *Drosophila melanogaster*. *Hereditas Lund* **4** 1923 pp. 142–159.
- 1588.—Mokrzecki, S. Ueber den Parasitismus von Fliegen (Diptera) im Körper von Land-Schnecken. *Zs. wiss. Insektenbiol. Berlin* **18** 1923 pp. 135–137.
- Moles, M. L. see Baker & Moles.
- 1589.—Monchaux, Delamarre de. Sur l'insuffisance relative de certains moyens de protection des Insectes; à propos d'une note de M. A. Chappellier sur le régime alimentaire des corbeaux freux. *Bull. Soc. ent. France Paris* **1923** pp. 148–149.
- 1590.—Monnot, E. Le mécanisme du saut chez les Elatérides. Appendix II. *Bul. Soc. sci. méd. Rennes* **29** 1920 pp. 19–28 1 pl. [Col.]
- 1591.—Monnot, E. Le Bupreste chez les Anciens. *Bull. Soc. sci. méd. Rennes* **30** 1921 pp. 14–26, 43–52 3 figs. [Col.]
- Monnot, E. see Houlbert & Monnot.
- 1592.—Montet, G. Thynnidés nouveaux du Muséum d'Histoire Naturelle de Genève. *Rev. suisse Zool. Geneva* **29** 1922 pp. 177–226 figs. [Hym.]
- 1593.—Monzen, K. Morphologische und biologische Untersuchungen über *Tetraneura moriokaensis*, n. sp. *Scient. Researches Alumni Assoc. Morioka Agric. Coll.* **1** 1923 Separate 6 pp. 2 pls. [Hom.]
- 1594.—Moore, R. C. & Hungerford, H. B. Water insects from a portion of the southern Utah Desert. *Kansas Univ. Sci. Bull. Lawrence* **14** 1922 pp. 409–421.
- 1595.—Mordvilkó, A. The woolly apple aphid (*Eriosoma lanigerum* Hausmann) and other Eriosomea. *C.R. Acad. Sci. Russ. Petrograd* **1923** pp. 40–42. [Hom.]

**1596.**—**Mordvilko, A. K.** On the distribution of some groups of Aphids in connection with their past. C.R. Acad. Sci. Russ. Petrograd 1923 pp. 43–45. [Hom.]

**1597.**—**Moreau, E.** Un *Papilio* nouveau de la Guyane française. Bull. Soc. ent. France Paris 1923 pp. 144 & 215 1 pl. [Lep.]

**1598.**—**Morgan, W. P.** Chromosomal variations in the earwig *Anisolabis annulipes* Lucas. Proc. Indiana Acad. Sci. 38 1923 p. 225–232 35 figs.

**1599.**—**Morgenthaler, O.** Ueber Milben im Bienenstock. Verh. schweiz. natf. Ges. Aarau 102 pt. 2 1921 p. 158. [Hym.]

**1600.**—**Morley, C.** A Synopsis of British Proctotrypidae (*Oxyura*). Ent. Mo. Mag. London 59 1923 pp. 142–149, 184–195, 228–232, 263–269. [Hym.]

**1601.**—**Moroder Sala, E.** Introducción al catálogo de los Hemípteros de la región valenciana. An. Inst. gen. & téc. Valencia 7 1920 (Trab. Lab. Hist. nat. 6) 18 pp. 3 pls.

**1602.**—**Moróder, E.** Coleopteros del lago de la Albufera de Valencia. Bol. R. Soc. esp. Hist. nat. Madrid 23 1923 pp. 70–73.

**Morrison, E.** see Morrison, H. & E.

**1603.**—**Morrison, H.** A report on a collection of Coccidae from Argentine, II (Hemiptera Coccidae). Proc. Ent. Soc. Washington 25 1923 pp. 122–126 1 pl.

**1604.**—**Morrison, H.** On three apparently new species of *Termitaphis* (Hem. Het.). Zoologica New York 3 1923 pp. 403–408 1 pl.

**1605.**—**Morrison, H. & Morrison, E.** The scale insects of the subfamilies Monophlebinae and Margarodinae treated by Maskell. Proc. U. S. Nat. Mus. Washington D.C. 62 1923 art. 17 pp. 1–47 3 pls. [Hom.]

**1606.**—**Morstatt, H.** Bibliographie der Pflanzenschutzliteratur. Das Jahr 1922. Biol. Reichsanst. Land- u. Forstw. Berlin 1923 162 pp.

**1607.**—**Mosely, M. E.** Scent-organs in New Zealand Trichoptera. Trans. Ent. Soc. London 1922 1923 pp. civ–cvi.

**Moses, M. S.** see Metz & Moses; also Metz, Moses & Mason.

**1608.**—**Motas, C. & Knechtel, V.** Contribution à la faune des Coléoptères d'eau douce de Roumanie. Bull. Acad. roumaine Bucarest 7 1921 pp. 105–107

**1609.**—**Moulton, J. C.** On butterflies from Pulo Condore. J. Nat. Hist. Soc. Siam Bangkok 6 1923 pp. 127–134. [Lep.]

**1610.**—**Moulton, J. C.** Some Pierine Butterflies new to Malaysia. J. Malayan Br. R. Asiat. Soc. 1 1923 pp. 233–236. [Lep.]

**1611.**—**Moulton, J. C.** Cicadas of Malaysia. J. Fed. Malay St. Mus. Kuala Lumpur 11 1923 pp. 69–182 5 pls. [Hom.]

**1612.**—**Mousley, H.** *Erora laeta* Edw. (Lepid.). Canad. Ent. Orillia 55 1923 pp. 26–29.

**1613.**—**Mrha, G.** Etwas über *Cal. dominula* L. Ent. Zs. Frankfort o. M. 37 1923 p. 18. [Lep.]

**1614.**—**Mueller, R.** Ueber die Sinneszellen im Fühler von *Necrophorus vespillo* L. Ent. Rdsch. Stuttgart 40 1923 pp. 2, 5–7, 9–10 5 figs. [Col.]

**1615.**—**Muesebeck, C. F. W.** A revision of the North American species of Ichneumon-flies belonging to the genus *Meteorus*, Haliday. Proc. U. S. Nat. Mus. Washington D.C. 63 art. 2 no. 2470 1923 pp. 1–44 2 figs. [Hym.]

**1616.**—**Muir, F.** On the homology between the genitalia of some species of Diptera and those of *Merope tuber*. Trans. Ent. Soc. London 1923 pp. 176–180 2 pls.

**1617.**—**Muir, F.** New species of Fulgorids (Homoptera). Ann. Mag. Nat. Hist. London (9) 11 1923 pp. 553–560.

**1618.**—**Muir, F.** On the characters separating Heteroptera from Homoptera. Ent. Mo. Mag. London 59 1923 p. 254.

**1619.**—**Muir, F.** On the classification of the Fulgoroidea (Homoptera). Proc. Hawaiian Ent. Soc. Honolulu 5 1922 1923 pp. 205–247 5 pls.

1620.—Muir, F. Two species of Delphacidae (Homoptera) from Ker-madec Archipelago. Trans. N. Z. Inst. Wellington **54** 1923 p. 257.

1621.—Muir, F. New species of New Zealand Delphacidae (Homoptera). Trans. N. Z. Inst. Wellington **54** 1923 pp. 258–259 4 figs.

1622.—Muir, F. A new species of *Derbe* Fabr. (Homoptera). Notulae Ent. Helsingfors **3** 1923 p. 67.

1623.—Muir, F. A new Philippine *Stenocranus* (Delphacidae, Homoptera). Philip. J. Sci. Manila **22** 1923 pp. 157–159 2 figs.

1624.—Muir, F. The Genus *Myndus* in the Malay States (Homoptera). Philip. J. Sci. Manila **22** 1923 pp. 161–170 1 pl.

1625.—Muir, F. Two collections of Fulgoroidea from Sumatra. Phillip. J. Sci. Manila **22** 1923 pp. 171–178 1 pl. [Hom.]

1626.—Muir, F. *Achiliixius*, a new genus, constituting a new family of the Fulgoroidea (Homoptera). Phillip. J. Sci. Manila **22** 1923 pp. 483–487 1 plate.

1627.—Müllenberger, H. Entwicklung der Schmetterlingskunde im Luxemburger Land. Gesellsch. Luxemb. Naturfreunde Festschrift zur Feier des 25-jährigen Bestehens 1890–1915 pp. 253–257. [Lep.]

Müller, G. see Müller, J.

1628.—Müller, J. Die *Brachynus* Arten des Küstenlandes und Dalmatiens. Boll. Soc. Adriat. Sci. nat. Trieste **25** 1911 pp. 68–76. [Col.]

1629.—Müller, J. Revision der *Athous*-Arten der ostadiatischen Provinzen. Boll. Soc. Adriat. Sci. nat. Trieste **26** Parte 2 1912 pp. 97–143. [Col.]

1630.—Müller, J. Bestimmungstabellen ostadiatischen Koleopteren. I. Curculionidae: subfam. Attelabinae. II. Curculionidae: genus *Sitones* Germ. Boll. Soc. Adriat. Sci. nat. Trieste **27** Parte 1 1913 pp. 57–100.

1631.—Müller, J. Contributo alla conoscenza della fauna cavernicola italiana. Boll. Soc. Adriat. Sci. nat. Trieste **27** Parte 2 1913 pp. 35–45. [Col.]

1632.—Müller, J. Due nuove formiche della regione Adriatica. Boll. Soc. Adriat. Sci. nat. Trieste **27** Parte 2 1913 pp. 45–49. [Hym.]

1633.—Müller, J. Tenebrionidae Dalmatiae. Verh. zool.-bot. Ges. Wien **70** 1920 pp. 132–233. [Col.]

1634.—Müller, J. Secondo contributo alla conoscenza della fauna cavernicola italiana. Atti Acc. ven.-trent. Padua **12–13** 1922 pp. 22–35 2 figs. [Col., Thysanura.]

1635.—Müller, J. Risultati scientifici della Spedizione Ravasini-Lona in Albania. v. Carabidae. Boll. Soc. ent. ital. Genoa **55** 1923 pp. 105–112. [Col.]

1636.—Müller, J. Contributo alla conoscenza del genere *Staphylinus* L. Boll. Soc. ent. ital. Genoa **55** 1923 pp. 135–144. [Col.]

1637.—Müller, J. Note mirmecologiche. Mem. Soc. ent. ital. Genoa **2** 1923 pp. 65–76. [Hym.]

1638.—Müller, J. Bestimmungstabellen der *Dyschirius*-Arten Europas und der mir bekannten Arten aus dem übrigen palaearktischen Faunengebiet. Koleopt. Rundschau Vienna **10** (1922) 1923 pp. 33–120. [Col.]

1639.—Müller, J. Vier neue Anophthalmen aus Krain (Col. Carab.). Wiener ent. Ztg. **40** 1923 pp. 101–106.

1640.—Müller, J. Ueber *Odontoderus* und *Diadochus*. (Col. Elat.). Wiener ent. Ztg. **40** 1923 pp. 106–107.

1641.—Müller, M. Unsere märkische Pillenwespe (*Eumenes* F.). D. ent. Zs. Berlin 1923 pp. 624–633. [Hym.]

1642.—Müller-Rutz, J. Aus der Welt der Kleinschmetterlinge. Mitt. Entomologia Zürich **5** 1920 pp. 334–349 1 plate. [Lep.]

1643.—Munster, T. Koleopterologisk litteratur vedkommende vort lands fauna. Norsk Ent. Tidsskr. Christiania **1** 1923 pp. 212–215.

1644.—Munster, T. Finmarksvidden. En heiarktisk fauna. *Bembidion hyperboraeorum*, n. sp. Norsk Ent. Tidsskr. Christiania **1** 1923 pp. 235–239. [Col.]

1645.—Munster, T. *Notiophilus Duméril* (Coleoptera). Yderligere bemerkninger. Norsk Ent. Tidsskr. Christiania 1 1923 pp. 239–240.

1646.—Munster, T. Insecta, ex Sibiria meridionali et Mongolia in itinere Ørjan Olsen 1914 collecta. A. Coleoptera, a Fritz Jensen lecta. vi, Coccinellidae. Norsk Ent. Tidsskr. Christiania 1 1923 pp. 241–243.

1647.—Munster, T. *Dyschirius Bonelli* (Col.). De norske arter. Norsk Ent. Tidsskr. Christiania 1 1923 pp. 244–250.

1648.—Muschamp, P. A. H. *Coenonympha iphiodes* und einige seiner Verwandten. Mitt. Entomologia Zürich 1 1915 pp. 12–26 2 pls. [Lep.]

1649.—Mutchler, A. J. Notes on West Indian Lycidae and Lampyridae (Coleoptera), with descriptions of new forms. Amer. Mus. Novit. New York 60 1923 pp. 1–13 1 fig.; 63 1923 pp. 1–9 1 fig.

Mutchler, A. J. see Leng & Mutchler.

1650.—Muttkowski, R. A. Studies on the blood of insects. I. The composition of the blood. Bull. Brooklyn Ent. Soc. 18 1923 pp. 127–136.

1651.—Myers, J. G. A contribution to the study of New Zealand leaf-hoppers and plant-hoppers (Cicadellidae and Fulgoroidea). Trans. N. Z. Inst. Wellington 54 1923 pp. 407–429. [Hom.]

1652.—Myers, J. G. New species of New Zealand Cicadidae. Trans. N. Z. Inst. Wellington 54 1923 pp. 430–431. [Hom.]

1653.—Nachtsheim, H. Parthenogenese, Gynandromorphismus und Geschlechtsbestimmung bei Phasmiden. Zs. indukt. Abstammungslehre Berlin 30 1923 pp. 287–289. [Orth.]

1654.—Naufock, A. Zwei neue Lepidopteren aus der Umgebung von Triest. Boll. Soc. Adriat. Sci. nat. Trieste 27 Parte 1 1913 pp. 101–103 figs.

1655.—Navás, L. Travaux scientifiques de l'Armée d'Orient (1916–1918). Névroptères. Bull. Mus. Hist. nat. Paris 1923 pp. 84–90, 154–160 7 figs.

1656.—Navás, L. Über einige Myrmeleoniden (Neur.) aus Süd-Afrika. D. ent. Zs. Berlin 1923 pp. 432–434 1 fig.

1657.—Navás, L. Névroptères de Barbarie. Bull. Soc. Hist. nat. Afr. Nord Algiers 14 1923 pp. 339–340.

1658.—Navás, L. Algunos insectos de Chile. Rev. chil. Hist. nat. Santiago 25 (1921) 1923 pp. 443–445 1 fig. [Neur. etc.]

1659.—Navás, L. Alguns insectos de Brasil. Rev. Mus. São Paulo 13 1923 pp. 765–774 1 pl. 1 fig. [Neur.]

1660.—Navás, L. Os *Corydalus* do Brasil. Chacaras e Quintaes S. Paulo 28 1923 pp. 17–18 2 figs. [Neur.]

1661.—Nawa, U. A study on *Luciola ibukiyamana* Matsumura. Konchu Sekai [Insect World] Gifu 25 1921 pp. 256–260 1 fig. [Col.]

1662.—Neiva, A. & Pinto, C. Estudo actual dos conhecimentos sobre o genero *Rhodnius* Stål, com a descrição de uma nova especie. Brazil-Medico Rio de Janeiro 37 (1) 1923 pp. 20–24. [Hem.]

1663.—Neiva, A. & Pinto, C. Dos Reduvides hematophagos encontrados no Distrito Federal e Estado do Rio de Janeiro com a descrição de uma especie nova. Brazil-Medico Rio de Janeiro 37 (1) 1923 pp. 45–47. [Hem.]

1664.—Neiva, A. & Pinto, C. Dos hemipteros hematophagos do Norte do Brasil com a descrição de duas novas especies. Brazil-Medico Rio de Janeiro 37 (1) 1923 pp. 73–76.

1665.—Neiva, A. & Pinto, C. Representantes dos generos *Triatoma* Lap. e *Rhodnius* Stål encontrados no Brazil Central e Sul; observações biológicas e descrição de uma nova especie. Brazil-Medico Rio de Janeiro 37 (1) 1923 pp. 84–86. [Hem.]

1666.—Neiva, A. & Pinto, C. Chave dos Reduvides hematophagos brasileiros; habitos, synonymia e distribuição. Brazil-Medico Rio de Janeiro 37 (1) 1923 pp. 98–104. [Hem.]

1667.—Neiva, A. & Pinto, C. Sobre uma anophelina brasileira (*Cellia cuyabensis* nov. sp.). Brazil-Medico Rio de Janeiro 37 (1) pp. 235–236 3 figs. [Dipt.]

1668.—Netolitzky, F. & Vogel, G. Die Bembidiini Ostpreussens. Schr. physik. Ges. Königsberg **57** (1916) 1917 pp. 55–73. [Col.]

1669.—Neuschild, A. Auf Schmetterlingsjagd im Kaukasus. Intern. ent. Zs. Guben **17** 1923 pp. 93–99. [Lep.]

1670.—Newstead, R. On a new species of *Phlebotomus* from Japan. Ann. Trop. Med. & Parasit. Liverpool **17** 1923 pp. 531–532 1 fig. [Dipt.]

1671.—Newstead, R. *Glossina zie-manni*, Grünberg, a synonym of *Glossina palpalis* sub-species *fuscipes*, Newstead. Ann. Trop. Med. & Parasit. Liverpool **17** 1923 pp. 533–534. [Dipt.]

1672.—Nicholson, A. J. The Development of the Ovary and Ovarian Egg of a Mosquito, *Anopheles maculipennis* Meig. Q. J. Microsc. Sci. London N. S. **65** 1921 pp. 395–450 4 pls. [Dipt.]

1673.—Nicolas, A. Sur une forme nouvelle de *Chrysocarabus punctato-auratus* Germ. de l'Ariège et un hybride de *splendens* Fab. et de *punctatoauratus*. Misc. ent. Castanet-Tolosan **27** 1923 p. 17. [Col.]

1674.—Nicolay, A. S. & Weiss, H. B. The group Traches in North America. Part II. The genus *Brachys* (Col.). J. New York Ent. Soc. **31** 1923 pp. 59–76 1 pl.

1675.—Nielsen, E. Contributions to the life history of the Pimpline spider parasites (*Polysphincta*, *Zaglyptus*, *Tromatobia*). (Hym. Ichneum.) Ent. Medd. Copenhagen **14** 1923 pp. 137–205 34 figs.

1676.—Niepelt, W. Neue Formen palaearktischer und exotischer Lepidopteren. Intern. ent. Zs. Guben **17** 1923 pp. 96, 133–134.

1677.—Nire, K. Some butterflies hitherto unrecorded from Japan. Konchu Sekai [Insect World] Gifu **25** 1921 pp. 109–115. [Lep.]

1678.—Nitsche, J. Aberrativformen aus Niederösterreich. Verh. zool.-bot. Ges. Wien **64** 1914 pp. (161)–(163). [Lep.]

Nonidez, J. F. see Metz & Nonidez.

Nordström, A. see Forsius & Nordström.

1679.—Noskiewicz, J. Einige Abnormitäten bei den Apiden. Polskie Pismo Ent. Lemberg **2** 1923 pp. 20–24 1 pl. [Hym.]

1680.—Noskiewicz, J. *Andrena dobrowlanensis* n. sp. Polskie Pismo Ent. Lemberg **2** 1923 pp. 90–92. [Hym.]

1681.—Notman, H. A new genus and species of Staphylinidae parasitic on a South American opossum. Amer. Mus. Novit. New York **68** 1923 pp. 1–3. [Col.]

1682.—Novicky, S. Description d'un nouveau genre de Satyridae (Lepid.). Bul. Sect. ent. Mus. Nat. Prague **1** 1923 pp. 60–61 2 figs.

1683.—Obenberger, J. Studien über die Buprestidengattung *Sphenoptera* Latr. I. Arch. Naturg. Berlin **85** Abt. A Heft 3 (1919) 1920 pp. 101–138 [Col.]

1684.—Obenberger, J. Une série de nouveaux genres de Buprestides. Bul. Sect. ent. Mus. Nat. Prague **1** 1923 pp. 13–44 3 figs. [Col.]

1685.—Obenberger, J. Remarques sur quelques Buprestides palaearctiques nouveaux ou intéressants. Bul. Sect. ent. Mus. Nat. Prague **1** 1923 pp. 62–66. [Col.]

1686.—Obenberger, J. Descriptions of new Australian Buprestidae. Bul. Sect. ent. Mus. Nat. Prague **1** 1923 pp. 72–81. [Col.]

1687.—Obenberger, J. De novis Buprestidarum regionis palaearcticae speciebus III. Časopis Českoslov. Společ. Ent. Prague **20** 1923 pp. 15–29. [Col.]

1688.—Obenberger, J. De novis Buprestidarum Africæ borealis speciebus. Časopis Českoslov. Společ. Ent. Prague **20** 1923 pp. 81–87. [Col.]

1689.—Obenberger, J. Drei neue Buprestidenarten aus Capland (Col.). Neue Beiträge system. Insektenk. Berlin **2** 1923 pp. 117–119.

1690.—Obenberger, J. Analecta IV. Neue Beiträge system. Insektenk. Berlin **2** 1923 pp. 109–111 & 113–115. [Col.]

1691.—Oberberger, J. Studien über die Buprestiden. vi. Gattung *Germarica* Blackburn. vii. Südamerikanische Trachydinen. Ent. Blätter Berlin **19** 1923 pp. 114–125. [Col.]

1692.—Oberberger, J. Eine Serie neuer Buprestidenarten. Tijdschr. Ent. The Hague **66** 1923 pp. 1–32 2 figs. [Col.]

1693.—Oberthür, C. Catalogue des Lépidoptères des Pyrénées-Orientales. Etudes Lép. Rennes **20** 1923 pp. 1–159 ; **21** 1923 part 2 pp. 9–70.

1694.—Oberthür, C. Lépidoptères de la région Sino-Thibétaine. Etudes Lép. Rennes **20** 1923 pp. 199–211 2 pls. 6 figs.

1695.—Oberthür, C. Révision iconographique des espèces de Phalénites (*Geometra* Linné) enumérées et décrites par Guenée dans le Volume X du Species général des Lépidoptères, publié à Paris, chez l'éditeur Roret, en 1857. Etudes Lép. Rennes **20** 1923 pp. 214–283 13 pls.

1696.—Oberthür, C. Le *Chrysophanus dispar* hollandais. Etudes Lép. Rennes **21** 1923 pt. 2 pp. 71–75 2 figs.

1697.—Oberthür, C. Les Sphingidae hybrides. Etudes Lép. Rennes **21** 1923 pt. 2 pp. 91–111 3 pls. 1 plan. [Lep.]

1698.—Oberthür, C. Lépidoptères nouveaux ou peu connus de Madagascar, d'Amérique et d'Europe. Etudes Lép. Rennes **21** 1923 pt. 2 pp. 113–179 pls.

1699.—Oberthür, C. Observations synonymiques. Etudes Lép. Rennes **21** 1923 pt. 2 (bis) pp. 9–14.

1700.—Oberthür, C. *Argynnис* et *Melitaea*. Considérations préliminaires sur la loi de variation qui régit les espèces des genres *Argynnис* et *Melitaea*. Etudes Lép. Rennes **20** 1923 pp. 293–300 3 pls.

1701.—Oberthür, C., Cleu, H. & Powell, H. Découverte en France, dans les Hautes-Alpes par le Docteur Cleu, de la *Saturnia (Graellsia) isabellae*, Graells. Etudes Lép. Rennes **20** 1923 pp. 161–197 26 pls. ; **21** 1923 pt. 2 pp. 77–90. [Lep.]

1702.—Oberthür, C. & Houlbert, C. Rhopalocères armoricains (analyse et

descriptions des espèces). Bull. Soc. sci. méd. Rennes **29** 1920 pp. 217–232 ; **30** 1921 pp. 233–260 figs.

1703.—Ochs, G. *Hydrophilus caraboides* L. var. *flaviventris* n. Ent. Blätter Berlin **19** 1923 p. 46. [Col.]

1704.—Ochs, G. Eine *Orectochilus* aus dem tropischen Africa. Ent. Blätter Berlin **19** 1923 pp. 169–171. [Col.]

1705.—Oestlund, O. W. A Synoptical Key to the Aphididae of Minnesota. 19th Rept. Minnesota State Ent. St. Paul 1923 pp. 114–151. [Hom.]

1706.—Ogloblin, A. A. Two new Strepsiptera from materials of National Museum of Natural History in Prague. Bul. Sect. ent. Mus. Nat. Prague **1** 1923 pp. 45–47 3 figs. [Col.]

1707.—Oguma, K. The Idiochromosomes of the Mantis. J. Coll. Agric. Hokkaido Imp. Univ. **10** 1921 pp. 1–27 3 figs. 3 tables. [Orth.]

1708.—Ohaus, F. *Cymboptera*, gen. nov. Phaenomerin. (Col. Lamell.). D. ent. Zs. Berlin 1923 pp. 167–168.

1709.—Ohaus, F. Beiträge zur Kenntnis von der Lebensweise unserer einheimischen Blatthornkäfer. Ent. Rundsch. Stuttgart **40** 1923 pp. 37–39, 41–43, 45–49. [Col.]

1710.—Ohaus, F. V. Nachtrag zur Kenntnis der Philippinischen Ruteliden (Coleoptera, Lamellicornia). Philipp. J. Sci. Manila **22** 1923 pp. 581–590 1 pl.

1711.—O'Hea, J. P. & Locket, G. H. Tactile vision of Insects and Arachnida. Nature London **111** 1923 pp. 409, 498 570, 705, 848.

1712.—Okamoto, H. Ueber drei Arten der Untergattung *Oyamia* (Plecoptera). Trans. Sapporo Nat. Hist. Soc. **8** 1921 pp. 45–50 1 pl.

1713.—Okamoto, H. Zweiter Beitrag zur Kenntnis der japanischen Plecopteren. Bull. Agr. Expt. Sta. Govt. Gen. Chosen (Suigen, Corea) **1** 1922 pp. 1–46 6 pls. 1 fig.

1714.—Oke, C. Notes on the Victorian Chlamydopsini (Coleoptera) with descriptions of new species. Vict. Nat. Melbourne **40** 1923 pp. 152–162.

1715.—Oldenberg, L. Die Rhamphomyien (Dipt.) des Wiener Hofmuseums. Arch. Natg. Berlin Abt. A 83 Heft 6 (1917) 1919 pp. 14–27.

1716.—Oldenberg, L. Neue Acalyptraten (Dipt.) meiner Ausbeute. D. ent. Zs. Berlin 1923 pp. 307–319.

1717.—Olivier, E. Description de deux espèces nouvelles de Lampyrides. Bull. Soc. Nat. Luxembourg 23 1913 pp. 72–73. [Col.]

1718.—Olsufiev, G. *Silphopsyllus desmanae*, gen. et sp. n. (Coleoptera, Leptinidae), parasite du rat musqué. Rev. russe Ent. Petrograd 18 1923 pp. 81–90 8 figs.

1719.—Ondřej, A. Beitrag zur Kenntnis der Cetoniden. Arch. Natg. Berlin Abt. A 83 Heft 4 (1917) 1919 pp. 136–142 6 figs. [Col.]

1720.—Onslow, H. The inheritance of wing-colour in Lepidoptera. VI. *Diaphora mendica* Cl. & var. *rustica* Hb. J. Genetics Cambridge 11 1921 pp. 277–292 1 pl. 10 text-figs. VII. Melanism in *Hemerophila abruptaria* var. *fuscata*, Tutt. t.c. pp. 293–298 1 pl.

1721.—d'Orchymont, A. Les *Hydraenae* américaines. Ann. Soc. ent. Belg. Brussels 63 1923 pp. 33–44. [Col.]

1722.—d'Orchymont, A. Hydrophilidae of India (Col.). A list of the species in the collection of the Agricultural Research Institute at Pusa (Bihar). Mem. Dept. Agr. India Pusa Ent. Ser. 8 1923 pp. 1–12.

1723.—d'Orchymont, A. Neue oder interessante Sphaeridiinen und Hydrophilinen der Malayischen Region. Treubia Buitenzorg 3 1923 pp. 416–421. [Col.]

1724.—Osborn, H. Two Tachigalia Membracids. Zoologica New York 3 1921 pp. 233–234 1 fig. [Hom.]

1725.—Osborn, H. Homoptera in the vicinity of Cranberry Lake. N. Y. State Coll. Forestry Syracuse Tech. Pubn. 16 1922 pp. 24–54, 87–104 2 pls. 7 figs.

1726.—Osborn, H. New species of Cicadellidae from the southern U. S. (Homoptera). Florida Ent. Gainesville 6 1922 pp. 17–20.

1727.—Osborn, H. Hemiptera of Connecticut: Parasitica. Conn. N. H. Surv. Hartford Bull. 34 1923 pp. 17–24 1 pl. [Anoplura.]

1728.—Osborn, H. Neotropical Homoptera of the Carnegie Museum. Parts I & II. Ann. Carnegie Mus. Pittsburg 15 1923 pp. 8–79 3 pls.

1729.—Osborn, H. Some confused species of *Phlepsius* and *Eutettix* (Homoptera). Ohio J. Sci. Columbus 23 1923 pp. 160–162.

1730.—Osborn, H. & Drake, C. J. An ecological study of the Hemiptera of the Cranberry Lake Region, New York. N. Y. State Coll. Forestry Syracuse Tech. Pubn. 16 1922 pp. 5–24 12 figs.

1731.—Osborn, H. & Lathrop, F. H. The genus *Phlepsius* in North America (Homoptera). Ann. Ent. Soc. America Columbus Ohio 16 1923 pp. 310–349 12 pls. 9 figs.

1732.—Oshima, M. Fauna simularis. Termitidae. Capita Zoologica, The Hague 2 pt. 3 1923 22 pp. 20 figs. [Isopt.]

1733.—Oudemans, A. C. Mededelingen over Mallophaga en Pediculi v. Ent. Ber. Ned. Ent. Vereen. The Hague 6 1923 pp. 163–168.

1734.—Oudemans, J. T. Rupsenbeschrijvingen VII. *Larentia hastata* L. Ent. Ber. Ned. Ent. Ver. The Hague 6 1923 pp. 161–163. [Lep.]

1735.—Paillet, A. Sur une technique nouvelle permettant l'étude vitale du sang des insectes. C.R. Soc. Biol. Paris 88 1923 pp. 1046–1048.

1736.—Paillet, A. Sur la variabilité du cycle évolutif d'un Ichneumonide, parasite nouveau des larves de *Neurotomia nemoralis* L. C.R. Soc. Biol. Paris 1923 89 pp. 1045–1048. [Hym.]

Paillet, A. see Faure & Paillet.

1737.—[Parfentev, I. A.] Парфентев, И. А. Revue de la littérature moderne sur *Phytometra (Plusia) gamma* (1914–1922). Bull. Soc. ent. Moscou 2 no. 2 1923 pp. 38–44. [Lep.] [In Russian.]

1738.—Pariser, K. Beiträge zur Biologie und Morphologie der einheimischen Chrysopiden. Arch. Natg. Berlin Abt. A 88 Heft 11 (1917) 1919 pp. 1–57 2 pls. 26 figs. [Neur.]

Pariser, K. see Goldschmidt & Pariser.

1739.—Parker, R. R. New Sarco-phagidae from Asia, with data relating to the *dux* group. Ann. Mag. Nat. Hist. London (9) 11 1923 pp. 123–129 4 figs. [Dipt.]

Parker, R. R. see Dunn & Parker.

Parker, S. L. see Pearl & Parker; also Parker & Gonzalez.

1740.—Parshley, H. M. On some Hemiptera from western Canada. Occ. Paprs. Mus. Zool. Univ. Michigan Ann Arbor no. 71 1919 35 pp.

1741.—Parshley, H. M. Hemiptera of Connecticut: Heteroptera: Termatophylidae to Scutelleridae. Conn. N. H. Surv. Hartford Bull. 34 1923 pp. 383–385, 665–674, 692–707, 737–783 1 pl. 50 figs.

1742.—Parshley, H. M. Records of Nova Scotian Hemiptera-Heteroptera. Proc. Acadian Ent. Soc. Fredericton N.B. 8 1922 1923 pp. 102–108.

1743.—Parshley, H. M. On the ecology of *Podops cinctipes* Say and *Rhytidolomia saucia* Say (Hemiptera, Pentatomidae). Canad. Ent. Orillia 55 1923 pp. 69–71 2 figs.

1744.—Parshley, H. M. The distribution and forms of *Lygaeus kalmii* Stål, with remarks on insect zoogeography (Hemiptera, Lygaeidae). Canad. Ent. Orillia 55 1923 pp. 81–84.

1745.—Parshley, H. M. Hemipterological Notices.—II. (Miridae, Lygaeidae). Ent. News Philadelphia 34 1923 pp. 21–22.

1746.—Patch, E. M. Hemiptera of Connecticut: Psyllidae, Aphididae. Conn. N. H. Surv. Hartford Bull. 34 1923 pp. 243–250 1 pl. 4 figs; pp. 250–256 5 pls. 7 figs.

1747.—Patch, E. M. Insects, Arachnids and Chilopods of the Pribilof Islands, Alaska; Homoptera. North Amer. Fauna Washington D.C. no. 46 1923 pp. 143–144 1 pl.

1748.—Patjaud, E. Contribution à l'étude de quelques *Bombyx*. Rev. Hist. nat. appl. Paris (I) 4 1923 pp. 266–274, 307–320, 344–348. [Lep.]

1749.—Patton, W. S. Some Philippine species of the genus *Musca* Linnaeus. Philippine J. Sci. 23 1923 pp. 309–322. [Dipt.]

1750.—Patton, W. S. A new Oriental species of the genus *Musca* with a note on *Musca dasyops* Stein in China and a revised List of the Oriental Species of the genus *Musca* Linnaeus. Philippine J. Sci. 23 1923 pp. 323–335. [Dipt.]

1751.—Peacock, A. D. The biology of *Thrinax mixta* Kl. & *T. macula* Kl. Proc. Univ. Durham Phil. Soc. 6 1923 pp. 365–374. [Hym.]

Peacock, A. D. see Chawner & Peacock.

1752.—Pearce, E. J. Contributions towards a list of the Fauna of the South Ebudes. III. The terrestrial Coleoptera. Scot. Nat. Edinburgh 1923 pp. 153–161.

1753.—Pearl, R. & Parker, S. L. On the influence of density of population upon the rate of reproduction in *Drosophila*. Proc. Nat. Acad. Sci. Washington 8 1922 pp. 212–219. [Dipt.]

1754.—Pearl, R., Parker, S. L. & Gonzalez, B. M. Experimental studies on the duration of life. VII. The Mendelian inheritance of duration of life in crosses of wild type and quintuple stocks of *Drosophila melanogaster*. VIII. The influence upon duration of life of certain mutant genes of *Drosophila melanogaster*. Amer. Nat. New York 57 1923 pp. 153–191, 289–325 43 tables 31 figs. [Dipt.]

Pearson, K. see Thomson, Bell & Pearson.

1755.—Pendlebury, H. M. Notes on the Lepidoptera Rhopalocera (butterflies) taken in Nakon Sri Tamarat, Peninsular Siam. J. F. M. S. Mus. Kuala Lumpur 11 1923 pp. 21–48.

1756.—Pendlebury, H. M. Preliminary notes on some Lepidoptera Heterocera (moths) taken in expedition to Nakon Sri Tamarat, Peninsular Siam. J. F. M. S. Mus. Kuala Lumpur 11 1923 pp. 49–51.

- 1757.—Pendlebury, H. M. Four new species of *Bombus* from the Malay Peninsula. J. F. M. S. Mus. Kuala Lumpur **11** 1923 pp. 64–67. [Hym.]
- 1758.—Péneau, J. L'hivernage chez les insectes. Bull. Soc. Sci. nat. Nantes (4) **1** 1921 pp. iii–v.
- 1759.—Péneau, J. Troisième contribution à l'étude des métamorphoses des Hémiptères. Bull. Soc. Sci. nat. Nantes (4) **1** 1921 pp. 35–43 1 pl.
- 1760.—Péneau, J. Contribution à la faune de l'Île de Ré (principalement : Insectes Coléoptères et Hémiptères). Bull. Soc. Sci. nat. Nantes (4) **1** 1921 pp. 44–65 figs.
- Péneau, J. see Guérin & Péneau.
- 1761.—Penecke, K. A. Zwei neue *Otiorrhynchus* aus den Ost-Alpen. Wiener ent. Ztg. **40** 1923 pp. 140–145. [Col.]
- 1762.—Pennington, M. S. Hemípteros nuevos para la República Argentina (primera parte). Physis Buenos Aires **6** 1923 pp. 315–319 2 figs.
- 1763.—Perfiljew, P. Über den Mechanismus der Kiemenautotomie bei den Larven einiger Libellen. Arch. mikr. Anat. Berlin **98** 1923 pp. 283–291 figs. [Odon.]
- Perkins, R. C. L. see Poulton & Perkins.
- 1764.—Peryassú, A. Uma nova especie de mosquito do Brasil. A Folha Medica Rio de Janeiro **4** 1923 p. 2 [non vidi]. [Dipt.]
- 1765.—Peryassú, A. Os culicídeos do Brasil. Catalogo das subfamilias, generos, especies e synonymias de mosquitos pernilongos encontrados no Brasil (Abril de 1923). A Folha Medica Rio de Janeiro **4** 1923 pp. 61–63, 69–71, 74–76, 85–87. [Dipt.]
- 1766.—Peryassú, A. Uma nova especie de Anophelino do genero *Cyclolepidopteron*. A Folha Medica Rio de Janeiro **4** 1923 pp. 68–69 1 fig. [Dipt.]
- 1767.—Peschet, R. Mission géodésique de l'Equateur. Collections recueillies par M. le Dr. Rivet. [Coléoptères : Dytiscidae.] Bull. Mus. Hist. nat. Paris **1923** pp. 61–63.
- 1768.—Peschet, R. Dytiscidae et Haliplidiae nouveaux (Col.). Bull. Soc. ent. France Paris **1923** pp. 175–181.
- 1769.—Peschet, R. Description d'un *Oretochilus* nouveau de Sumatra (Col. Gyrinidae). Bull. Soc. ent. France Paris **1922** 1923 pp. 293–294.
- 1770.—Petrocchi, J. Estado actual de la sistemática de los Culicinae (mosquitos) en la República Argentina. Enumeración de especies. Rev. Inst. bact. Buenos Aires **3** 1923 pp. 83–93. [Dipt.]
- 1771.—Petroff, A. Note sur *Celerio mauretanica* Stgr. (Lepid.). Bull. Soc. R. ent. Egypte Cairo **1922** 1923 pp. 35–37.
- 1772.—Petry, A. Zur Naturgeschichte des *Gnophos pullata* Tr. D. ent. Zs. Iris Dresden **37** 1923 pp. 1–3. [Lep.]
- 1773.—Petry, A. Ueber *Elachista hedemanni* Rbl. D. ent. Zs. Iris Dresden **37** 1923 pp. 4–7. [Lep.]
- 1774.—Petry, A. Zur Biologie und geographischen Verbreitung von *Conchylis conjunctana* Mn. D. ent. Zs. Iris Dresden **37** 1923 pp. 7–9. [Lep.]
- 1775.—Pettey, F. W. A new species of Psyllid. S. African J. Nat. Hist. Pretoria **4** 1923 pp. 30–33 1 fig. [Hom.]
- 1776.—Peyerimhoff, P. de. Nouveaux Coléoptères du Nord-Africain. 43<sup>e</sup>–45<sup>e</sup> note. Bull. Soc. ent. France Paris **1922** 1923 pp. 318–321; **1923** pp. 14–17 1 fig. & 78–81.
- 1777.—Peyerimhoff, P. de. Les Coléoptères des euphorbes dans le Maroc méridional. Bull. Soc. Sci. nat. Maroc Rabat **3** 1923 pp. 43–63 2 figs.
- 1778.—Pfankuch, K. Aus der Ichneumonologie (Hym.). Klarstellung der Gravenhorstschen Typen. D. ent. Zs. Berlin **1923** pp. 73–89.
- 1779.—Pfankuch, K. Aus der Ichneumonologie (Hym.). Die Brischkeschen Tryphoniden-Typen des ostpreussischen Provinzialmuseums in Königsberg. D. ent. Zs. Berlin **1923** pp. 571–582.
- 1780.—Pfankuch, K. Die gattung *Acrodactyla* Hal. (Hym., Ichneum.). Zs. Schädlingsbekämpfung Berlin **1** 1923 pp. 23–26.

1781.—Phillips, K. C. J. The larva of a Hydrophilid beetle *Megasternum boletophagum*. Irish Nat. Dublin 32 1923 pp. 109–112 8 figs. [Col.]

1782.—Phillips, V. T. A Revision of the Trypetidae of Northeastern America. J. New York Ent. Soc. 31 1923 pp. 119–154 2 pls. [Dipt.]

1783.—Phillips, W. J. & Poos, F. W. Five new species belonging to the genus *Harmolita* Motschulsky (*Isosoma* Walker et auct.). Kansas Univ. Sci. Bull. Lawrence 14 1922 pp. 349–359 2 pls. [Hym.]

1784.—Philitschenko, J. Studien über Variabilität. 3. Über die Variabilität der Colembolen. Zs. indukt. Abstammungslehre Berlin 30 1923 pp. 145–162.

1785.—Philpott, A. Notes and descriptions of New Zealand Lepidoptera. Trans. N.Z. Inst. Wellington 54 1923 pp. 148–154.

1786.—Philpott, A. A study of the venation of the New Zealand species of Micropterygidae. Trans. N. Z. Inst. Wellington 54 1923 pp. 155–161 12 figs. [Zeugloptera.]

1787.—Pic, M. Nouveautés diverses. Mélanges Exot. Entom. Moulins 38 1923 pp. 1–32; 39 1923 pp. 3–32; 40 1923 pp. 1–32. [Col.]

1788.—Pic, M. Deux nouveaux *Hylophilus* Bert., du Tonkin (Col.). Bull. Soc. ent. France Paris 1923 pp. 37–38.

1789.—Pic, M. Nouveaux Coléoptères d'Afrique. Bull. Soc. ent. France Paris 1923 pp. 62–64.

1790.—Pic, M. Nouveaux Coléoptères exotiques. Bull. Soc. ent. France Paris 1923 pp. 142–143.

1791.—Pic, M. Scaphidiides exotiques nouveaux (Col.). Bull. Soc. ent. France Paris 1923 pp. 194–196.

1792.—Pic, M. *Prionocerus* Perty et *Idgia* Cast. du Muséum National de Paris (Coléoptères, Malacodermes). Bull. Mus. Hist. nat. Paris 1923 pp. 72–73.

1793.—Pic, M. Nouveaux Coléoptères Malachides, II. Bull. Mus. Hist. nat. Paris 1923 pp. 372–379.

(n-12519 j) Q

1794.—Pic, M. Nouveaux Cryptocerphalides d'Afrique (Col.). Bull. Mus. Hist. nat. Paris 1923 pp. 430–434 & 509–514.

1795.—Pic, M. Nouveaux Coléoptères du Tonkin. Bull. Soc. Zool. France Paris 48 1923 pp. 269–271.

1795.—Pic, M. Nouveaux Coléoptères exotiques. Ann. Soc. linn. Lyon 69 1923 pp. 73–76.

1797.—Pic, M. Notes diverses, descriptions et diagnoses. Echange, Moulins 39 1923 pp. 1–3, 5–7, 9–11. [Col.]

1798.—Pic, M. Coléoptères exotiques en partie nouveaux. Échange Moulins 39 1923 pp. 4, 7–8, 11–12, 15–16.

1799.—Pic, M. Mutations, synonymies, nouveautés. Échange Moulins 39 1923 pp. 13–14. [Col.]

1800.—Pic, M. Hyménoptères français et algériens. Échange Moulins 39 1923 pp. 14–15.

1801.—Pic, M. Contribution à l'étude des Helodidae (Col.). Échange Moulins 39 1923 hors-texte pp. 1–4.

1802.—Pic, M. Contribution à l'étude des Lycides. Échange Moulins 39 1923 hors-texte pp. 29–40. [Col.]

1803.—Pic, M. Descriptions de deux Malacoderms marocains (Coléoptères). Bull. Soc. Sci. nat. Maroc Rabat 3 1923 p. 19.

1804.—Pic, M. Sur divers Coléoptères intéressants ou nouveaux d'Egypte. Bull. Soc. R. ent. Egypte Cairo 1922 1923 pp. 95–104.

1805.—Pic, M. Un nouveau Coléoptère phytopophage d'Italie. Boll. Soc. ent. ital. Genoa 55 1923 pp. 28–29.

1806.—Pic, M. Nouveaux Coléoptères Dascillides de Sumatra. Tijdschr. Ent. The Hague 66 1923 pp. 86–87.

1807.—Picard, F. L'hibernation des chenilles de *Pieris brassicae* L. Bul. biol. France & Belg. Paris 57 1923 pp. 98–106. [Lep.]

1808.—Picard, F. Recherches biologiques et anatomiques sur *Melittobia acasta* Walk. (Hyménoptère Chalcidien). Bul. biol. France & Belg. Paris 57 1923 pp. 469–508 6 figs.

1809.—**Picard**, F. Note sur la biologie de *Melittobia acasta*, Walk. (Hym. Chalcidae). Bull. Soc. ent. France Paris 1922 1923 pp. 301–304.

**Picard**, F. *see* Ferton, C.

1810.—**Picco**, L. Descrizione di tre nuove specie di Emitteri dell'Italia centrale. Bol. Soc. zool. ital. Rome 1919 1921 pp. 99–107. [Hem.]

**Picout-Laforest**, A. *see* Foley & Picout-Laforest.

1811.—**Pictet**, A. Réactions thermotropiques chez les Insectes (Résumé). C.R. Soc. Phys. Hist. nat. Genève 31 1915 pp. 54–56. [Lep.]

1812.—**Pictet**, A. Sur le prétendu hydrotropisme et géotropisme chez les Insectes. C.R. Soc. Phys. Hist. nat. Genève 31 1915 pp. 58–60.

1813.—**Pictet**, A. Influence de la pression barométrique sur le développement des Lépidoptères. C.R. Soc. Phys. Hist. nat. Genève 32 1916 pp. 24–26.

1814.—**Pictet**, A. Le développement des Lépidoptères : le rôle de la température en relation avec la pression barométrique. C.R. Soc. Phys. Hist. nat. Genève 32 1916 pp. 27–29.

1815.—**Pictet**, A. Sur l'origine de quelques races géographiques de Lépidoptères. C.R. Soc. Phys. Hist. nat. Genève 34 1918 pp. 32–34.

1816.—**Pictet**, A. Résistance des Lépidoptères à la compression, à l'asphyxie et au froid. C.R. Soc. Phys. Hist. nat. Genève 34 1918 pp. 53–57.

1817.—**Pictet**, A. Sur l'origine du dimorphisme sexual de coloration chez les Lépidoptères. C.R. Soc. Phys. Hist. nat. Genève 35 1918 pp. 17–22.

1818.—**Pictet**, A. Intervention de l'élévation de la température pour provoquer l'éclosion des Papillons. C.R. Soc. Phys. Hist. nat. Genève 35 1918 pp. 32–34. [Lep.]

1819.—**Pierce**, F. N. & **Metcalfe**, J. W. The genitalia of the Tortricidae. Liverpool 1922 pp. 1–101 pls. 1–34.

1820.—**Pierre**, C. Contribution au Catalogue des Diptères de France. Tipuliformes. Ann. Soc. linn. Lyon 65 (1918) 1919 pp. 63–76; 67 (1920) 1921 pp. 73–77. [Dipt.]

1821.—**Pierre**, C. Tipulidae d'Egypte capturés par M. Hassan Efflatoun (Dipt.). (Première Note). Bull. Soc. R. ent. Egypte Cairo 1922 1923 pp. 81–86 1 fig.

1822.—**Pigorini**, L. Comportamento del glicogeno nelle uova di *Bombyx mori* durante lo sviluppo. Atti Ist. veneto 82 1923 pp. 351–355 [Lep.]

1823.—**Pigorini**, L. & **Tocco**, R. di. Casi di nascite plurime da singole uova di *Bombyx mori* (poliembronia). Atti Acc. Lincei Rome (5) 32 1923 2nd sem. pp. 102–105. [Lep.]

1824.—**Pinto**, C. Sobre a copula do *Culex quinquefasciatus* Say, 1823 (*Culex fatigans* auct.). Brazil-Medico Rio de Janeiro 37 (1) 1923 pp. 278–279 3 figs. [Dipt.]

**Pinto**, C. *see* Neiva & Pinto.

1825.—**Pionneau**, P. Sur une capture intéressante de *Bacillus gallicus* Charp. en Gironde. Proc. verb. Soc. linn. Bordeaux 73 1921 pp. 102–103. [Orth.]

1826.—**Pirazzoli**, O. Nozioni elementari intorno ai Coleotteri italiani. Riv. Coleot. Genoa 1 1923 Suppl. 4 pp.

1827.—**Pirsch**, G. B. Studies on the temperature of individual insects, with special reference to the honey bee. J. Agric. Res. Washington D.C. 24 1923 pp. 275–287 1 plate. [Hym.]

1828.—**Pittioni**, B. Noctuidenfang an "naturlichem" Köder. Ent. Zs. Frankfort o. M. 37 1923 pp. 21–22. [Lep.]

1829.—**Plath**, O. E. Breeding experiments with confined *Bremus* (*Bombus*) queens. Biol. Bull. Wood's Hole Mass. 45 1923 pp. 325–341. [Hym.]

1830.—**Plath**, O. E. Observations on the so-called trumpeter in bumble-bee colonies. Psyche Boston Mass. 30 1923 pp. 146–154. [Hym.]

1831.—**Plath**, O. E. Notes on the egg-eating habit of bumblebees. Psyche Boston Mass. 30 1923 pp. 193–202. [Hym.]

1832.—**Pleske**, T. Genre et espèce nouveaux d'insecte Diptère (*Strobiloceromyia barovskii* Plsk.) de la sous-famille des Pachygastrinae provenant du gouvernement de Petrograd. Ann. Mus. zool. Acad. Sci. Russie Petrograd 24 1923 pp. 1–2.

1833.—[Pliginski, V. G.] Плигинский, В. Г. Nouvelle espèce du genre *Mycetophagus* Hellw. de la Crimée (Coleoptera, Mycetophagidae). Bull. Soc. ent. Moscou 2 no. 2 1923 pp. 78–79. [In Russian.]

1834.—Pliginski, V. G. Espèces nouvelles des Coléoptères paléarctiques. Rev. russe Ent. Petrograd 18 1923 pp. 141–143 4 figs. [In Russian.]

1835.—Poche, F. Zur Begründung dreier Anträge zwecks Einschränkung der Zahl der Namensänderungen und Abschaffung der liberum veto in der Internationalen Nomenklaturkommission. Arch. Natg. Berlin Abt. A 83 Heft 6 (1917) 1919 pp. 75–155.

1836.—Poisson, R. Accouplement, ponte et éclosion chez les Hémiptères aquatiques. Bul. biol. France & Belg. Paris 57 1923 pp. 89–97 1 fig.

1837.—Poisson, R. Persistance de la striation transversale dans les muscles non fonctionnels de certains Arthropodes. C.R. Soc. Biol. Paris 88 1923 pp. 1117–1119.

1838.—Poisson, R. Les Notonectes de la région normande (Hem.). Bull. Soc. ent. France Paris 1922 1923 pp. 299–301 5 figs.

Poisson, R. see Mercier & Poisson.

1839.—Pomeroy, A. W. J. The Irritating Hairs of the Wild Silk Moths of Nigeria. Bull. Imp. Inst. London 19 1921 pp. 311–318 2 pls. 13 figs. [Lep.]

1840.—Pongrácz, S. Magyarország Chrysopái alak- és rendszertani tekintetben. [Die Chrysopiden Ungarns in morphologisch-systematischer Beziehung.] Allat. Közlem. Budapest 11 1912 pp. 161–221 4 pls. 11 figs. [Neur.]

1841.—Pongracz, S. A rovarok faji criteriuma. [Das Artkriterium der Insekten.] Allatt. Közlem. Budapest 15 1916 pp. 119–129 6 figs. (German summary p. 202). [Neur.]

1842.—Pongrácz, A. Neuropteroiden (Exploraciones zoologicae ab E. Csiki in Albania peractae. XI). Magyar Tud. Akad. Balkan-kut. tud. ered. Budapest 1 1923 pp. 143–166 13 figs. [Neur., etc.]

1843.—Pongrácz, S. Beiträge zur Kenntnis der *Bryodema tuberculata* F. Rovart. L. Budapest 26 1923 pp. 61–67 1 fig.

(N-12519 j) Q

Poos, F. W. see Phillips & Poos.

1844.—Poppius, B. Lepidoptera aus dem Sarekgebirge. Naturwiss. Untersuch. Sarekgebirg. Schwed. Lappland Stockholm 4 1919 pp. 763–778.

1845.—Poppius, B. & Bergroth, E. Beiträge zur Kenntnis der myrmecoiden Heteropteren. Ann. Hist. nat. Mus. Natl. Hung. Budapest 18 1921 pp. 31–88 2 pls.

1846.—Poppius, B., Lundström, C. & Frey, R. Dipteren aus dem Sarekgebiet. Naturwiss. Untersuch. Sarekgebirg. Schwed. Lappland Stockholm 4 1917 pp. 665–696 pl.

1847.—Porak, R. & Taijan, L. Les glandes génitales des vers à soie. C.R. Soc. Biol. Paris 89 1923 pp. 787–788. [Lep.]

1848.—Porritt, G. T. Five hitherto unnamed varieties of British Lepidoptera. Ent. Mo. Mag. London 59 1923 pp. 87–88.

1849.—Porter, C. E. Entomología chilena. Sobre algunos insectos de Nilahue. Rev. chil. Hist. nat. Santiago 21 1917 pp. 192–194.

1850.—Porter, C. E. Los Tisanópteros. An. Zool. aplic. Santiago 7 1920 pp. 21–32. [Thys.]

1851.—Porter, C. E. Descripción de un nuevo Cóccido chileno. An. Zool. aplic. Santiago 7 1920 pp. 33–34 1 fig. [Hom.]

1852.—Porter, C. E. Sobre algunos Arthrópodos colectados en diversas localidades del país por los señores J. N. Thomas, José A. Campo, J. A. Wolffsohn, R. Barros V., etc. Rev. chil. Hist. nat. Santiago 24 (1920) 1921 pp. 153–160 1 fig.

1853.—Porter, C. E. Un nuevo Bráconido chileno. Rev. chil. Hist. nat. Santiago 25 (1921) 1923 pp. 26–27. [Hym.]

1854.—Porter, C. E. Sobre algunos Sirfidos de Chile. Rev. chil. Hist. nat. Santiago 25 (1921) 1923 pp. 446–447. [Dipt.]

1855.—Porter, C. E. Notas breves sobre Longicornios chilenos. Rev. chil. Hist. nat. Santiago 25 (1921) 1923 pp. 495–501 2 figs. [Col.]

1856.—Porter, C. E. Descripción de un nuevo Hemiptero chileno. Rev. chil. Hist. nat. Santiago **25** (1921) 1923 pp. 505–506.

1857.—Porter, C. E. Insecto nuevo de la Fam. Berytidae. Rev. chil. Hist. nat. Santiago **27** 1923 pp. 20–21 1 fig. [Hem.]

1858.—Porter, C. E. Dos Longicornios raros o poco conocidos. Rev. chil. Hist. nat. Santiago **27** 1923 pp. 52–53. [Col.]

1859.—Porter, C. E. Los estudios sobre Neurópteros chilenos. (Apuntes históricos y bibliográficos.) Rev. chil. Hist. nat. Santiago **27** 1923 pp. 168–181 3 figs.

1860.—Portevin, G. Révision des Necrophorini du Globe. Bull. Mus. Hist. nat. Paris **1923** pp. 64–71, 141–146, 226–233, 303–309. [Col.]

1861.—Portevin, G. Description d'une nouvelle espèce de Silphide (Col.) des collections du Muséum. Bull. Mus. Hist. nat. Paris **1923** pp. 380–381.

1862.—Portevin, G. Sur le genre *Eusilpha* Semenov. Misc. ent. Castanet-Tolosan **26** 1923 p. 81. [Col.]

1863.—Poulton, E. B. The Inspiration of the Unknown. S. E. Nat. London **1921** pp. 1–34.

1864.—Poulton, E. B. The utilisation of derived plant-pigments in the colouring of Lepidoptera. Proc. Ent. Soc. London **1922** 1923 pp. vi–xiii.

1865.—Poulton, E. B. Transformational deceptive resemblance in Insects. Proc. Ent. Soc. London **1922** 1923 pp. xlvi–lxix.

1866.—Poulton, E. B. The Ethiopian races of *Heodes phlaeas* L. Proc. Ent. Soc. London **1922** 1923 pp. li–lvi. [Lep.]

1867.—Poulton, E. B. *Pseudopontia paradoxa* Feld.; its bionomics, geographical races, and affinity. Proc. Ent. Soc. London **1922** 1923 pp. lvi–lxiv 1 pl. [Lep.]

1868.—Poulton, E. B. Notes on Insects visiting the common primrose. Proc. Ent. Soc. London **1922** 1923 pp. lxxxiv–lxxxvii.

1869.—Poulton, E. B. & Perkins, R. C. L. A new point in the procraptic

resting attitude of *Polygonia (Graptia) c. album* L. Proc. Ent. Soc. London **1922** 1923 pp. xix–xxi, lxx–lxxi.

Powell, H. see Oberthür, Cleu & Powell.

1870.—Preissecker, F. [Notes on some Lepidoptera.] Verh. zool.-bot. Ges. Wien **72** (1922) 1923 pp. (92)–(96).

1871.—Prell, H. Über eine "fremd-dienliche Zweckmässigkeit" bei Insekten und ihre kasuale Analyse. Biol. Zentralbl. Leipzig **43** 1923 pp. 432–439 [Hym.]

1872.—Prell, H. Ueber Schutztrachten und Mimikry. Zs. wiss. Insektenbiol. Berlin **18** 1923 pp. 336–345.

1873.—Priesner, H. Zur Thysanopteren Fauna Ostpreussens. Schr. physik. Ges. Königsberg **57** (1916) 1917 pp. 50–54.

1874.—Priesner, H. Beiträge zur Lebensgeschichte der Thysanopteren. I. *Thrips klapaleki* Uz., ein Orchideenschädling. SitzBer. Ak. Wiss. Wien Abt. I **130** 1921 pp. 215–222 figs.

1875.—Priesner, H. Beiträge zur Morphologie der Jugendstadien der Thysanopteren. SitzBer. Ak. Wiss. Wien Abt. I **132** 1923 pp. 1–18.

1876.—Priesner, H. A. Dampf's Aegypten-Ausbeute: Thysanoptera. Ent. Mitt. Berlin **12** 1923 pp. 63–66 & 115–121 7 figs.

1877.—Priesner, H. Ein neuer *Oxythrips* (Thysanopt.) aus Oesterreich. Wiener ent. Ztg. **40** 1923 pp. 115–117.

1878.—Priesner, H. Thysanoptera (Physopoda, Blasenfüsse). Biol. Tiere Deutschlands, Berlin, Borntraeger 1923 Teil 29 10 pp. 7 figs.

1879.—Priesner, H. Die Larven der gelben *Thrips*-Arten (Thysanoptera). Zs. Schädlingsbekämpfung Berlin **1** 1923 pp. 16–20 11 figs.

1880.—Priesner, H. Ein Beitrag zur Kenntnis der Thysanopteren Surinams. Tijdschr. Ent. The Hague **66** 1923 pp. 88–111 9 figs.

1881.—Prochaska, L. Zwei aberrative Geometridenformen. Verh. zool.-bot. Ges. Wien **69** 1919 pp. (136)–(138) 4 figs. [Lep.]

1882.—**Prochaska, L.** [Petilampa arcuosa Hw. ab. luciola n.] Verh. zool.-bot. Ges. Wien **70** 1920 p. (97). [Lep.]

1883.—**Prout, A. E.** A new *Eligma* (Lep. Noctuidae) from Tanganyika Territory. Entomologist London **56** 1923 p. 85.

1884.—**Prout, L. B.** Sexual dimorphism and mimicry in Geometrids of the genus *Bordeta* Walk. Proc. Ent. Soc. London **1922** 1923 pp. xci-xciv. [Lep.]

1885.—**Prout, L. B.** New species and forms of Geometridae. Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 305-322. [Lep.]

1886.—**Prout, L. B.** New Geometridae in the Tring Museum. Nov. Zool. Tring **30** 1923 pp. 191-215. [Lep.]

1887.—**Prüffer, J.** Beitrag zur Kenntnis der Lepidopterenfauna von Białowies. Polskie Pismo Ent. Lemberg **2** 1923 pp. 2-10.

1888.—**Przibram, H.** Mitteilungen aus der Biologischen Versuchsanstalt. Nr. 56. Verpuppung kopfloser Raupen. Anz. Ak. Wiss. Wien **58** 1921 pp. 35-36. [Lep.]

1889.—**Przibram, H. & Brecher, L.** Die Farbmodifikation der Stabheuschrecke *Dixippus morosus* Br. und Redt. (Zugleich: Ursachen tierischer Farbkleidung. VI.) Anz. Ak. Wiss. Wien **57** 1920 pp. 164-165. [Orth.]

1890.—**Puchov, N.** Matériaux pour la biologie des Mylabrides de la Sibérie, avec description de leurs triangulins. Извест. Сибирского Энт. Бюро. [Bull. Siberian Ent. Bur.] Petrograd no. 2 1923 pp. 45-53 1 fig. [In Russian.] [Col.]

1891.—**Puel, L.** Quelques variétés nouvelles du genre *Pogonus* Dej. (Coleoptera). Misc. ent. Castanet-Tolosan **26** 1923 pp. 89-91.

1892.—**Puttmans, A.** Caixinhas para criação e observação de pequenos animaes. Arch. Esc. sup. Agric. & Med. vet. Nictheroy **7** 1923 pp. 25-28 1 pl.

1893.—**Quelle, F.** Das Rätsel des Wabenbaues der *Apis mellifica*. D. ent. Zs. Berlin **1923** pp. 319-331. [Hym.]

**Querci, O.** see Verity & Querci.

1894.—**Rabaud, E.** Le peuplement des cavernes et le comportement des êtres vivants. Biologica Paris **1** 1911 pp. 389-394 6 figs. [Col., Orth.]

1895.—**Rabaud, E.** Les pattes ravisseuses et la convergence des formes. C.R. Soc. Biol. Paris **88** 1923 pp. 25-27.

1896.—**Rabaud, E.** L'autotomie par torsion chez certains Apiaires. C.R. Soc. Biol. Paris **89** 1923 pp. 229-231. [Hym.]

1897.—**Rabaud, E.** Recherches sur la variation chromatique et l'homochromie des Arthropodes terrestres. Bull. biol. France & Belg. Paris **57** 1923 pp. 1-69.

1898.—**Rabaud, E.** Sur la nidification de *Ceratina callosa* F. (Hyménoptères). Ann. Soc. ent. France Paris **91** 1923 pp. 277-280.

1899.—**Rabaud, E.** Sur le comportement de *Scatophaga stercoraria* L. (Dipt.). Bull. Soc. ent. France Paris **1923** pp. 167-168.

**Rabaud, E.** see Lichtenstein & Rabaud; also Ferton, C.

1900.—**Ragusa, E.** Note lepidotterologiche siciliane. Boll. Soc. ent. ital. Genoa **55** 1923 pp. 17-22. [Lep.]

1901.—**Ragusa, E.** Le Aegeridae (Sesiidae) della Sicilia. Boll. Lab. Zool. gen. agrar. R. Scuola sup. Agric. Portici **16** 1923 pp. 211-210. [Lep.]

1902.—**Rambousek, G.** Résultats scientifiques de l'armée Tchéco-Slovaque en Russie et en Sibérie IV. Staphylinidae III. Časopis Českoslov. společ. ent. Prague **20** 1923 pp. 54-55. [Col.]

1903.—**Ramme, W.** Vorarbeiten zu einer Monographie des Blattidengenus *Ectobius* Steph. Arch. Natg. Berlin Abt. A **89** 1923 Heft 7 pp. 97-145 2 pls. [Orth.]

1904.—**Ramme, W.** Orthopterologische Ergebnisse meiner Reise nach Oberitalien und Südtirol 1921. Arch. Natg. Berlin Abt. A **89** 1923 Heft 7 pp. 145-169 3 pls.

1905.—**Ramsden, C. T.** A new *Kricogonia* from Cuba (Lep., Rhop.). Mem. Soc. cubana Hist. nat. Havana **4** 1922 pp. 211-212.

Ramsden, C. T. see Skinner & Ramsden.

1906.—Rapp, O. Die Käfer in Panzers "Fauna insectorum Germaniae initia." Neue Beitr. syst. Insektenk. Berlin 2 1922 pp. 102–104, 107–108; 1923 111–112, 115–116, 119–134. [Col.]

1907.—Raymundo, B. *Castnia laura*, Druce. Bol. Soc. ent. Brasil Rio de Janeiro 1922 pp. 12–13 1 pl. [Lep.]

1908.—Raynor, G. H. Seven new varieties of *Abraxas grossulariata*. Ent. Rec. London 35 1923 pp. 140–141. [Lep.]

1909.—Rau, P. A note on the nesting habits of *Tachytes distinctus* Sm. Psyche Boston Mass. 30 1923 pp. 220–221. [Hym.]

1910.—Rau, P. The nesting habits of *Odynerus pedestris*, Sauss., and *Stenancistrocerus saecularis*, Sauss. (Hymen.; Eumenidae). Ent. News Philadelphia 34 1923 p. 243.

1911.—Ravasini, C. Risultati scientifici della Spedizione Ravasini-Lona in Albania. vi. Pselafidi e Scidmenidi. Boll. Soc. ent. ital. Genoa 55 1923 pp. 123–126 1 fig. [Col.]

1912.—Readio, P. A. The ovipositors of the Cicadellidae (Homoptera). Kansas Univ. Sci. Bull. Lawrence 14 1922 pp. 217–265 12 pls.

1913.—Readio, P. A. The life history of *Jalysus spinosus* (Say) (Neidiidae, Heteroptera). Canad. Ent. Orillia 55 1923 pp. 230–236 1 pl.

1914.—Rebel, H. [Aberrative Tagfalter.] Verh. zool.-bot. Ges. Wien 64 1914 pp. (149)–(151) 3 figs. [Lep.]

1915.—Rebel, H. Lepidopteren von den Kanarischen Inseln. Verh. zool.-bot. Ges. Wien 64 1914 pp. (151)–(153) 2 figs.

1916.—Rebel, H. [Die *alveus*- und *malvae*-Gruppe der Gattung *Hesperia*.] Verh. zool.-bot. Ges. Wien 64 1914 pp. (189)–(201). [Lep.]

1917.—Rebel, H. Beitrag zur Lepidopterenfauna Griechenlands. Verh. zool.-bot. Ges. Wien 65 1915 pp. (50)–(59) 4 figs.

1918.—Rebel, H. Zur Stammesgeschichte der Zygaeniden. Verh. zool.-bot. Ges. Wien 65 1915 pp. (202)–(210). [Lep.]

1919.—Rebel, H. [Neue Lepidopteren.] Verh. zool.-bot. Ges. Wien 65 1915 pp. (211)–(216) 3 figs.

1920.—Rebel, H. Die Beschreibung heimischer Mikrolepidopteren. Verh. zool.-bot. Ges. Wien 66 1916 pp. (10)–(17) 1 fig.

1921.—Rebel, H. Beitrag zur Lepidopterenfauna Bulgariens. Verh. zool.-bot. Ges. Wien 66 1916 pp. (36)–(46) 1 fig.

1922.—Rebel, H. Ueber die ersten Stände von *Lythria purpurata* L. und *Lythria purpuraria* L. Verh. zool.-bot. Ges. Wien 66 1916 pp. (149)–(153). [Lep.]

1923.—Rebel, H. Beschreibung von 7 neuen paläarktischen Arten der Gattung *Depressaria* Hw. Verh. zool.-bot. Ges. Wien 67 1917 pp. (18)–(27). [Lep.]

1924.—Rebel, H. Beschreibung einer Anzahl neuer Mikrolepidopterenarten aus der Familie der Gelechiiden. Verh. zool.-bot. Ges. Wien 67 1917 pp. (49)–(55).

1925.—Rebel, H. Mitteilungen über Psychiden. Verh. zool.-bot. Ges. Wien 67 1917 pp. (133)–(137). [Lep.]

1926.—Rebel, H. Mitteilungen über paläarktische Mikrolepidopteren. Verh. zool.-bot. Ges. Wien 67 1917 pp. (205)–(215).

1927.—Rebel, H. Über Anzahl und Verbreitung der Lepidopterenarten. Verh. zool.-bot. Ges. Wien 68 1918 pp. (44)–(59) 3 tables.

1928.—Rebel, H. Beschreibung von vier neuen paläarktischen Lepidopteren. Verh. zool.-bot. Ges. Wien 68 1918 pp. (157)–(163) 3 figs.

1929.—Rebel, H. Zur Lepidopterenfauna Dalmatiens. Verh. zool.-bot. Ges. Wien 69 1919 pp. (106)–(110) 1 fig.

1930.—Rebel, H. *Axia (Cimelia) margarita* Hb. und eine neue Lepidopterenfamilie: Axiidae. Verh. zool.-bot. Ges. Wien 69 1919 pp. (111)–(114).

1931.—Rebel, H. Beitrag zur Kenntnis paläarktischer Mikrolepidopteren. Verh. zool.-bot. Ges. Wien **69** 1919 pp. (126)–(135) 2 figs.

1932.—Rebel, H. Falter-Aberrationen. Verh. zool.-bot. Ges. Wien **70** 1920 pp. (12)–(15) 4 figs. [Lep.]

1933.—Rebel, H. Einer neuer Tagfalterhybride. Verh. zool.-bot. Ges. Wien **70** 1920 pp. (75)–(81) 10 figs. [Lep.]

1934.—Rebel, H. Zur Bibliographie von Berge's Schmetterlingsbuch. Ent. Zs. Frankfort o. M. **36** 1923 pp. 61, 64–65; **37** pp. 22–23. [Lep.]

Rebel, H. see Gschwandner & Rebel.

Rebel, H. see Hauder & Rebel.

1935.—Reed, C. S. Dos Mantidos argentinos aclimatados en Chile. An. Zool. aplic. Santiago **7** 1920 p. 20. [Orth.]

1936.—Reed, C. S. La Concuna o Isoca de las Alfalfares de Mendoza (*Colias lesbia* Fabr.). [Monograph.] Mendoza 1922 20 pp. 4 figs. [Lep.]

1937.—Regan, W. S. An introductory study of the Psammocharinae with special reference to the American species of the genus *Lophopompilus* Radoszkowski. Ann. Ent. Soc. Amer. Columbus Ohio **16** 1923 pp. 177–190 3 pls. [Hym.]

1938.—Regen, J. Der Kropf von *Liogryllus campestris* L. als Organ zur Aufnahme von Luft zur Zeit der Häutung. Sitz. Ber. Ak. Wiss. Wien Abt. III **130–131** 1923 pp. 21–23 1 fig. [Orth.]

1939.—Règnier, R. Modèles nouveaux de boîtes d'élevage et d'exposition entomologique. Rev. Hist. nat. appl. Paris (I) **4** 1923 pp. 336–344 4 figs.

1940.—Reh, L. Die Wespenmimikry der Sesien. Verh. zool.-bot. Ges. Wien **70** 1920 pp. 99–112. [Lep.]

1941.—Rehn, J. A. G. North American Acrididae (Orthoptera). Paper 3. Trans. Amer. Ent. Soc. Philadelphia **49** 1923 pp. 43–92 6 pls.

Rehn, J. A. G. see Cresson & Rehn.

1942.—Reibisch, L. Über ein Gehörorgan bei Insekten. Schr. natw. Ver. Kiel **17** 1920 pp. 177–180.

1943.—Reichardt, A. Was ist *Saprinus concinnus* auctorum? Ent. Mitt. Berlin **12** 1923 pp. 235–244. [Col.]

1944.—Reichensperger, A. Myrmekologische Beobachtungen aus Luxemburg. Bull. Soc. Nat. Luxembourg N.S. **16** 1922 pp. 105–115 3 figs.

1945.—Reichensperger, A. Die Bauten des *Apicotermes occultus* Silv. Bull. Soc. Nat. Luxembourg N.S. **17** 1923 pp. 52–59 2 pls. 1 fig.

1946.—Reichensperger, A. Neue südamerikanische Histeriden als Gäste von Wanderameisen und Termiten. I. Systematischer Teil. Mitt. schweiz. ent. Ges. Bern **13** 1923 pp. 313–336 1 pl. [Col.]

1947.—Reichensperger, A. Neue südamerikanische Histeriden als Gäste von Wanderameisen und Termiten. I. Systematischer Teil [continued]. Zs. wiss. Insektenbiol. Berlin **18** 1923 pp. 243–252 1 pl. [Col.]

Reiff, W. see Cassino & Reiff.

1948.—Reineck, G. Über die Aberrationsfähigkeit von *Coccinella 10-punctata* L. (Col.). Arch. Natg. Berlin Abt. A **83** Heft 1 (1917) 1919 pp. 43–49 109 figs.

1949.—Reineck, G. Beitrag zur Variabilitätsfrage bei Coccinelliden. Arch. Natg. Berlin Abt. A **83** Heft 6 (1917) 1919 pp. 7–11 86 figs. [Col.]

1950.—Reineck, G. Bemerkungen über die Lebensweise von *Cicindela sylvicola* Latr. D. ent. Zs. Berlin **1923** pp. 277–280. [Col.]

1951.—Reineck, G. Beitrag zur Kenntnis der asiatisch-malayischen Megalopodinen (Col. Chrysom.). D. ent. Zs. Berlin **1923** pp. 605–612.

1952.—Reinhard, H. J. New Tachinidae from Texas (Diptera). Ent. News Philadelphia **34** 1923 pp. 266–269.

1953.—Reitter, E. Uebersicht der mir bekannten paläarktischen *Cymindis*-Arten (Col. Carab.). Wiener ent. Ztg. **40** 1923 pp. 1–15.

1954.—Reitter, E. Die palaearkischen Arten der Curculioniden-Gattung *Anisorrhynchus* Schönh. Wiener ent. Ztg. **40** 1923 pp. 17–21. [Col.]

1955.—Reitter, E. Die *Hylobius*-Arten aus Europa und den angrenzenden Gebieten (Col. Curcul.). Wiener ent. Ztg. **40** 1923 pp. 21–24.

1956.—Reitter, E. Die *Liparus*-Arten aus Europa und den angrenzenden Gebieten (Col. Curcul.). Wiener ent. Ztg. **40** 1923 pp. 42–48.

1957.—Remy, P. Orthoptères des Vosges méridionales. Notes biologiques. Ann. Soc. linn. Lyon **69** 1923 pp. 67–72.

1958.—Reuss, T. *Clossiana* (*Brenthis*) Hbn., *Boloria* Moore, *Argynnис* Fabr.) *lücki* T. R. nov. spec. Soc. ent. Stuttgart **38** 1923 p. 14. [Lep.]

1959.—Reuss, T. Somatische Mosaikeformen bei *Dryas paphia* L. aus der Mark. Soc. ent. Stuttgart **38** 1923 p. 26. [Lep.]

1960.—Reuss, T. *Dryas paphia* f. *subtusaurea* T. R. Soc. ent. Stuttgart **38** 1923 p. 44. [Lep.]

Reynier, A. see Cotte & Reynier.

1961.—Ribaut, H. *Pirates hybridus* Scop. et *stridulus* F. Bull. Soc. hist. nat. Toulouse **48** 1920 pp. 35–38 7 figs. [Heteropt.]

1962.—Ribaut, H. Notes sur les Hémiptères - Hétéroptères. Bull. Soc. hist. nat. Toulouse **48** [1920] 1921 pp. 65–72 figs.; **49** 1921 pp. 301–311 figs.

1963.—Ribeiro, S. Corrections and amplifications of Indian localities in Dr. Th. Becker's Monograph of the Dolichopodidae (Diptera). Rec. Ind. Mus. Calcutta **25** 1923 pp. 335–344.

Ribeiro, S. see Dover & Ribeiro.

1964.—Riedel, M. P. Ausländische Nematocera. Arch. Naturg. Berlin **85** Abt. A Heft 4 (1919) 1920 pp. 82–88 figs. [Dipt.]

1965.—Riedel, M. P. Nematocera Polyneura aus Neu-Guinea usw. des Ungarischen National-Museums in Budapest. Ann. hist.-nat. Mus. Natnl. Hung. Budapest **18** 1921 pp. 129–144 7 figs. [Dipt.]

1966.—Riel, P. Quelques mots sur la récolte et la préparation des Microlépidoptères, Micronévropières et Microhémiptères. Ann. Soc. linn. Lyon **66** [1919] 1920 pp. 41–43.

1967.—Riel, P. Les insectes parasites des Champignons, I. Elevages et première liste de Diptères fongicoles. Ann. Soc. linn. Lyon **67** [1920] 1921 37–44.

1968.—Riley, N. D. New Rhopalocera from Borneo. Entomologist London **56** 1923 pp. 35–38 1 pl. [Lep.]

1969.—Riley, N. D. Two undescribed Rhopalocera from Ceylon. Spolia Zeylanica **12** 1923 pp. 323–326. [Lep.]

1970.—Ringdahl, O. Översigt av de i vårt land hittills funna arterna av släktet *Phaonia* R.D. (fam. Muscidae). Ent. Tidskr. Stockholm **44** 1923 pp. 117–140. [Dipt.]

1971.—Ris, F. Im Tössstockschen-gebiet gesammelte Insekten aus den Ordnungen Plecoptera, Neuroptera und Trichoptera. Mitt. Entomologia Zürich **6** 1923 pp. 401–407.

1972.—Röber, J. Das Schienen-blättchen bei Schmetterlingen. Stettin. ent. Ztg. **84** 1923 pp. 93–94. [Lep.]

1973.—Röber, J. Neue Schmetter-linge usw. Stettin. ent. Ztg. **84** 1923 pp. 94–96. [Lep.]

1974.—Röber, J. Neue Schmetter-linge. Ent. Mitt. Berlin **12** 1923 pp. 57–59. [Lep.]

1975.—Robertson, C. Flower visits of insects. Psyche Boston Mass. **30** 1923 pp. 158–169.

1976.—Robertson-Miller, E. Observations on the *Bellura*. Ann. Ent. Soc. Amer. Columbus Ohio **16** 1923 pp. 374–383 3 pls. [Lep.]

1977.—Rocci, U. Ricerche sulle forme del gen. *Zygaena* Fabr. Atti Soc. ligustica Sc. nat. geogr. Genoa **32** 1921 pp. 33–42. [Lep.]

1978.—Rocci, U. Note di Lepidot-terologia. Mem. Soc. ent. ital. Genoa **2** 1923 pp. 5–12.

1979.—Roch, O. Ueber die Larve von *Mycetobia palipes*. Arch.-Naturg. Berlin **85** Abt. A Heft 2 (1919) 1920 pp. 277–298 figs. pl. [Dipt.]

1980.—Rogers, K. S. A. Geographical variation in East African butterflies. Part II. J. East Afr. Uganda Nat. Hist. Soc. no. 18 1923 pp. 31–35. [Lep.]

1981.—Rohdendorf, B. Zur Kenntnis der Gattung *Syntomogaster* Sch. Zool. Anz. Leipzig 57 1923 pp. 24–28 figs. [Dipt.]

1982.—Rohwer, S. A. Three new Pemphredonine wasps. J. Washington Acad. Sci. 13 1923 pp. 369–371.

1983.—Rohwer, S. A. New Aculeate Hymenoptera from the United States. Proc. Ent. Soc. Washington 25 1923 pp. 96–103.

1984.—Rohwer, S. A. A new *Macrocentrus* reared from the strawberry leaf roller (Hymenoptera, Braconidae). Proc. Ent. Soc. Washington 25 1923 pp. 168–169.

1985.—Rohwer, S. A. New Hymenoptera from the Malayan Region. Philipp. J. Sci. Manila 22 1923 pp. 345–356 1 fig.

1986.—Rohwer, S. A. New Malayan wasps of the subfamily Pseninae. Philipp. J. Sci. Manila 22 1923 pp. 593–601. [Hym.]

1987.—Roman, A. Three new English Ichneumonids. Ent. Mo. Mag. London 59 1923 pp. 29–32. [Hym.]

1988.—Roman, A. Ichneumonids reared from Diptera Nematocera. Ent. Mo. Mag. London 59 1923 pp. 71–76.

1989.—Roman, A. Ichneumonologische Notizen. Ent. Tidskr. Stockholm 44 1923 pp. 169–174 1 fig. [Hym.]

1990.—Roman, A. Nya *Polysphincta*-Former ur de Nielsen'ska Klackningarnas. Ent. Medd. Copenhagen 14 1923 pp. 206–210. [Hym.]

1991.—Romaniszyn, J. Les insectes des environs de Lwow. Polskie Pismo Ent. Lemberg 2 1923 pp. 35–39.

1992.—Root, F. M. Notes on mosquitoes and other blood-sucking flies from Porto Rico. Amer. J. Hyg. Baltimore Md. 2 1922 pp. 394–405 5 figs. [Dipt.]

1993.—Root, F. M. The male genitalia of some American *Anopheles* mosquitoes. Amer. J. Hyg. Baltimore Md. 3 1923 pp. 265–279 4 pls. [Dipt.]

1994.—Root, F. M. Notes on larval characters in the genus *Sarcophaga*. J. Parasit. Urbana Ill. 9 1923 pp. 227–229 1 pl. [Dipt.]

1995.—Root, F. M. Notes on Zygoptera (Odonata) from Maryland, with a description of *Enallagma pallidum*, n. sp. Ent. News Philadelphia 34 1923 pp. 200–204 2 figs.

1996.—Rosen, D. Some remarks about the distance between the genes in *Drosophila melanogaster*. Hereditas Lund 4 1923 pp. 231–234.

1997.—Rosenbeck, H. Hybridenzüchtung. Ent. Zs. Frankfurt o. M. 36 1923 pp. 60–61.

1998.—Rostagno, F. Lepidoptera faunae romanae.—Noctuidae. Boll. Soc. zool. ital. Rome (4) 1 (1919) 1920 pp. 29–45.

1999.—Roth, P. A propos de l'instinct de *Bembex rostrata* L. Ann. Soc. linn. Lyon 69 1923 pp. 47–52. [Hym.]

2000.—Roth, P. Contribution à la connaissance des Hyménoptères aculeata de l'Afrique du Nord. Description de *Bembex handlirschella* Ferton. Bull. Soc. Hist. nat. Afr. N. Algiers 14 1923 pp. 189–191.

Rothschild, N. C. see Jordan & Rothschild.

2001.—Roubal, J. Einige Addenda über Cavernicola. Arch. Natg. Berlin Abt. A 83 Heft 3 (1917) 1919 pp. 22–25. [Col., Hym.]

2002.—Roubal, J. Sechs neue palaearktische Coleopteren. Arch. Natg. Berlin Abt. A 83 Heft 7 (1917) 1919 pp. 36–39.

2003.—Roubal, J. Description d'un Soronina nouveau d'Europe (Col. Nitidulidae). Bull. Soc. ent. France Paris 1923 p. 181.

2004.—Roubaud, E. Les Mouches tsétsés dans l'Ouest Africain. Distribution géographique—Histoire—Role pathogène. Ann. Inst. Pasteur Paris 36 1922 pp. 720–728 1 map. [Dipt.]

2005.—Royer, M. Note sur le *Stenolemus novaki* Horváth (Hem. Reduviidae). Bull. Soc. ent. France Paris 1922 1923 pp. 321–322.

- 2006.—**Royer, M.** Description d'une nouvelle espèce de *Psacasta* Germ. de la faune paléarctique (Hem. Scutelleridae). Bull. Soc. ent. France Paris 1923 pp. 38–40.
- 2007.—**Royer, M.** Description d'un *Piocoris* Stål nouveau de la faune éthiopienne (Hem. Myodochidae). Bull. Soc. ent. France Paris 1923 pp. 65–67.
- 2008.—**Royer, M.** Note sur deux *Gerris* (Hem. Gerridae) réputés rares en France. Bull. Soc. ent. France Paris 1923 pp. 132–134.
- 2009.—**Royer, M.** Travaux scientifiques de l'Armée d'Orient (1916–1918). Hémiptères Hétéroptères (deuxième note). Bull. Mus. Hist. nat. Paris 1923 pp. 245–251.
- 2010.—**Rudolfs, W.** Observations on the relations between atmospheric conditions and the behaviour of mosquitoes. N. Jersey Agric. Expt. Sta. N. Brunswick Bull. 388 1923 32 pp. 6 figs. 5 tables. [Dipt.]
- 2011.—**Rühl, M.** Liste neuerdings beschriebener und gezogener Parasiten und ihre Wirte, viii. Soc. ent. Stuttgart 37 1922 pp. 3–4, 16, 20, 23–24, 27–28, 32, 35–36, 44; 38 1923 pp. 3–4, 7–8, 11–12, 16, 20, 24, 28, 32.
- 2012.—**Ruiz, P., F.** Observaciones sobre la existencia del *Sphex cyaniventris* Spin. en Chile. Rev. chil. Hist. nat. Santiago 25 (1921) 1923 pp. 579–581 1 fig. [Hym.]
- 2013.—**Ruschka, F.** Wasserhymenopteren. Verh. zool.-bot. Ges. Wien 64 1914 pp. (206)–(209). [Hym.]
- 2014.—**Ruschka, F.** Chalcididenstudien. Verh. zool.-bot. Ges. Wien 70 1920 pp. 234–315 43 figs.
- 2015.—**Ruschka, F.** Beiträge zur Kenntnis einiger Encyrtidengattungen (Hym. Chalcid.). Verh. zool.-bot. Ges. Wien 72 (1922) 1923 pp. 1–13.
- 2016.—**Ruschka, F.** Ein neuer Holzkäferparasit aus der Tribus Cleonymini Schmiedekn. (Hym. Chalcididae). Ent. Mitt. Berlin 12 1923 pp. 198–201 9 figs.
- 2017.—**Ruschka, F.** Die europäischen Arten der mit *Monodontomerus* Westw. verwandten Gattungen. (Chalcididenstudien IV. Teil.). Zs. angew. Ent. 9 1923 pp. 395–408 6 figs. [Hym.]
- 2018.—**Russ, E. L.** Contribuțiuni la studiul glandelor céfalice (mandibulară și maxilară) de la larvele de Trichoptera. An. Acad. Române Bucarest 31 1909 pp. 309–320 1 pl.
- 2019.—**Russo, G.** Le variazioni dell'azoto totale, estrattivo, amminico libero ed ammoniacale nella larva del Bombice del gelso durante il digiuno. Atti Acc. Gioenia Catania 13 Mem. 3 1922 pp. 1–7. [Lep.]
- 2020.—**Russo, G.** L'azoto nelle sue varie forme durante lo sviluppo del Bombyce del Gelso. Atti Accad. Gioenia Catania 13 Mem. 11 1922 pp. 1–19. [Lep.]
- 2021.—**Ryle, G. B.** Further notes on the Natural History of *Melanophila acuminata* De G. Ent. Mo. Mag. London 59 1923 pp. 1–3. [Col.]
- 2022.—**Saalas, U.** Studien über die Elateriden Finnlands. I. *Corymbites cupreus* Fabr. subsp. *aeruginosus* Fabr. und seine Verheerungen, besonders in der Gegend von Kainuu. Ann. Soc. Zool.-Bot. Fenniae Vanamo Helsingfors 2 1923 pp. 121–168 2 figs. 2 maps. [Col.]
- 2023.—**Saalas, U.** Die Fichtenkäfer Finnlands. Studien über die Entwicklungsstadien, Lebensweise und geographische Verbreitung der an *Picea excelsa* Link. lebenden Coleopteren nebst einer Larvenbestimmungstabelle. II. Spezieller Teil 2 und Larvenbestimmungstabelle. Ann. Acad. Scient. Fenn. Helsingfors Ser. A 22 1923 x+746 pp. 28 pls. [Col.]
- 2024.—**Sagarra, I. de.** Formes d'insectes Lepidoptera a addicionar a la fauna catalana. Butll. Inst. catal. Hist. nat. Barcelona (2) 1 1921 p. 71.
- St. George, R. A.** see Wade & St. George.
- 2025.—**Samal, J.** Etude morphologique et biologique de *Perla abdominalis* Burm. (Plécoptère). Ann. Biol. lacustre Brussels 12 1923 pp. 229–272 35 figs.
- Sánchez, D.** see Cajal & Sánchez,

2026.—**Sánchez y Sánchez**, D. Sobre el desarrollo de los elementos nerviosos en la retina del *Pieris brassicae* L. Trab. Lab. Invest. biol. Univ. Madrid 1920 reprint 192 pp. 67 figs. [Lep.]

2027.—**Sanders**, J. G. & De Long, D. M. Nine new species of Cicadellidae (Homoptera) from the United States and Canada. Proc. Ent. Soc. Washington 25 1923 pp. 151–156.

2028.—**Sandhouse**, G. The bee-genus *Dialictus*. Canad. Ent. Orillia 55 1923 pp. 193–195. [Hym.]

2029.—**Sandhouse**, G. A. A gynandromorphic bee of the genus *Osmia*. Amer. Nat. New York 57 1923 pp. 569.

2030.—**Sandhouse**, G. A. A key to some South American bees belonging to the genus *Halictus* subgenus *Chloralictus*. J. Washington Acad. Sci. 13 1923 pp. 383–384.

2031.—**Santschi**, F. Ponerinae, Dorylinae et quelques autres formicides néotropiques. Bull. Soc. Sci. nat. Lausanne 54 1921 pp. 81–103. [Hym.]

2032.—**Santschi**, F. *Solenopsis* et autres fourmis néotropicales. Rev. suisse Zool. Geneva 30 1923 pp. 245–273.

2033.—**Santschi**, F. *Messor* et autres fourmis paléarctiques. Rev. suisse Zool. Geneva 30 1923 pp. 317–336 figs.

2034.—**Santschi**, F. Description de quelques nouvelles fourmis de Brésil. Rev. Mus. São Paulo 13 1923 pp. 1255–1264. [Hym.]

2035.—**Santschi**, F. Notes sur les fourmis paléarctiques. 4<sup>ème</sup> note. Bol. R. Soc. esp. Hist. nat. Madrid 23 1923 pp. 133–137. [Hym.]

2036.—**Santschi**, F. *Pheidole* et quelques autres fourmis néotropiques. Ann. Soc. ent. Belg. Brussels 63 1923 pp. 45–69. [Hym.]

2037.—**Santschi**, F. L'orientation sidérale des fourmis et quelques considérations sur leurs différentes possibilités d'orientation. Mém. Soc. vaud. Sci. nat. Lausanne 1923 pp. 137–175 4 figs. [Hym.]

2038.—**Santschi**, F. Les différentes orientations chez les fourmis. Rev. zool. afr. Brussels 11 1923 pp. 111–144. [Hym.]

2039.—**Santschi**, F. Descriptions de nouveaux Formicides éthiopiens et notes diverses, I. Rev. zool. afr. Brussels 11 1923 pp. 259–295 5 figs. [Hym.]

2040.—**Saunders**, L. G. On the larva, pupa and systematic position of *Orphnephila testacea*, Macq. (Diptera Nematocera). Ann. Mag. Nat. Hist. London (9) 11 1923 pp. 631–640 2 pls. 1 fig.

2041.—**Savin**, W. M. A wasp that hunts cicadas. Nat. Hist. New York 23 1923 pp. 569–575 figs. [Hym.]

2042.—**Schatzmayr**, A. Una nuova forma del *Leptoderus hohenwarti*. Boll. Soc. Adriat. Sci. nat. Trieste 25 1911 pp. 63–65 pl. [Col.]

2043.—**Schatzmayr**, A. Studi sulla fauna coleotterologica della valle d'Oxo. Boll. Soc. Adriat. Sci. nat. Trieste 26 Parte 2 1912 pp. 145–158. [Col.]

2044.—**Schatzmayr**, A. Risultati scientifici della spedizione Ravasini-Lona in Albania. IV. Nuovi Coleotteri. Boll. Soc. ent. ital. Genoa 55 1923 pp. 7–8. [Col.]

2045.—**Schatzmayr**, A. Gli *Apion* italiani. Boll. Soc. ent. ital. Genoa 55 1923 pp. 83–96 113–116. [Col.]

2046.—**Schauberger**, E. Ein neuer *Pheropsophus* aus China. Ent. Anz. Vienna 3 1923 pp. 53–54. [Col.]

2047.—**Schauberger**, E. Zur Systematik der Carabidengruppe *Paraphonus* Ganglb. Ent. Anz. Vienna 3 1923 pp. 69–72. [Col.]

2048.—**Schauberger**, E. Beiträge zur Kenntnis der paläarktischen *Harpalus*-Arten. Ent. Anz. Vienna 3 1923 pp. 115–118. [Col.]

2049.—**Schauberger**, E. Eine neue Rasse des *Poecilus koyi* Germ.; über *Amara helleri* Gredler und eine neue Rasse der *Amara aulica* Panz. Ent. Anz. Vienna 3 1923 pp. 129–131. [Col.]

2050.—**Schaus**, W. New species of Notodontidae from South America in the Carnegie Museum. Ann. Carnegie Mus. Pittsburg 15 1923 pp. 80–90 1 pl. [Lep.]

2051.—Schaus, W. New species of American Geometridae in the United States National Museum (Lepidoptera). Insec. Insc. Menst. Washington D.C. **11** 1923 pp. 149–167.

2052.—Schaus, W. Galapagos Heterocera with description of new species. *Zoologica New York* **5** 1923 pp. 22–48 2 pls. 2 maps.

2053.—Schaus, W. A new genus and species of moth of economic interest in the United States National Museum. Proc. Ent. Soc. Washington **25** 1923 p. 164.

2054.—Schaus, W. & Cockerell, T. D. A. Three new forms of Rhopalocera from Colombia and a new Geometrid moth from Madeira (Lepid.). Proc. Ent. Soc. Washington **25** 1923 pp. 162–164.

2055.—Schawerda, K. 8.–11. Nachträge zur Lepidopterenfauna Bosniens und der Herzegowina. Verh. zool.-bot. Ges. Wien **64** 1914 pp. 349–378; **66** 1916 pp. 227–254 & 481–489; **68** 1918 pp. (19)–(36) 4 figs.

2056.—Schawerda, K. [Paläarktische Lepidopteren.] Verh. zool.-bot. Ges. Wien **65** 1915 pp. (85)–(91) 6 figs.

2057.—Schawerda, K. Neue Aberrationen. Verh. zool.-bot. Ges. Wien **68** 1918 pp. (163)–(164). [Lep.]

2058.—Schawerda, K. Über den Formenkreis von *Larentia truncata* und *Larentia immanata*. Verh. zool.-bot. Ges. Wien **70** 1920 pp. (92)–(95). [Lep.]

2059.—Schawerda, K. Aberrative Formen heimischer Arten. Verh. zool.-bot. Ges. Wien **70** 1920 pp. (95)–(97). [Lep.]

2060.—Schawerda, K. [Mitteilungen über einige Lepidoptera.] Verh. zool.-bot. Ges. Wien **72** (1922) 1923 pp. (91)–(92).

2061.—Schaxel, J. & Adensamer, W. Über experimentelle Verhinderung der Regeneration bei Phasmiden. Zool. Anz. Leipzig **56** 1923 pp. 128–133 figs. [Orth.]

2062.—Scheerpeltz, O. Mikroprojektionsmethoden. Ent. Anz. Vienna **3** 1923 pp. 65–69, 77–82, 89–92 2 figs.

2063.—Scheerpeltz, O. Eine neue *Aleochara* aus Niederösterreich mit

einer Uebersicht der palaearktischen Arten des Subgen. *Heterochaera* (Col. Staph.). (I. Beitrag zur Kenntnis der palaearktischen Staphylinidenfauna.) Koleopt. Rundsch. Vienna **10** 1923 pp. 154–160 2 figs.

2064.—Scheidter, F. *Lophyrus pallipes* Fall., ein bis jetzt wenig beachteter Forstsädlings. Zs. angew. Ent. Berlin **9** 1923 pp. 369–389 5 figs. [Hym.]

2065.—Scheidter, F. Zur Lebensweise unserer Holzwespen. Zs. Schädlingsbekämpfung Berlin **1** 1923 pp. 89–98 6 figs. 1 pl. [Hym.]

2066.—Schenkling, S. Erytylid-Studien I. Arch. Natg. Berlin Abt. A **83** Heft 11 (1917) 1919 pp. 77–93. [Col.]

2067.—Schenkling, S. Cryptophagidae. Col. Cat. Junk & Schenkling pt. 76, 92 pp. 1923.

2068.—Schilder, F. A. Sauter's Formosa-Ausbeute: Rhipiphoridae (Col.). (Zugleich: Rhipiphoriden-Studien, III). Ent. Mitt. Berlin **12** 1923 pp. 202–204.

2069.—Schilder, F. A. Rhipiphoriden-Studien. D. ent. Zs. Berlin **1923** pp. 331–334, 613–616. [Col.]

2070.—Schilder, F. A. Rhipiphoriden-Studien. IV. Bemerkungen zur Literatur und Nomenklatur. Ent. Blätter Berlin **19** 1923 pp. 167–169. [Col.]

2071.—Schjelderup-Ebbe, T. Verhältnisfarben bei Imago und Raupe der Tagfalter. Ent. Zs. Frankfort o. M. **37** 1923 pp. 33–34. [Lep.]

2073.—Schleicher, H. Einige Käfer-abnormitäten meiner Sammlung. Intern. ent. Zs. Guben **17** 1923 pp. 28–30. [Col.]

2074.—Schmidt, A. Aphodiinae. Das Tierreich, Berlin Lief. **45** 1922 pp. 1–614 34 figs. [Col.]

2075.—Schmidt, A. Hundertjährige Schmetterlingssammlung im Ungarischen National Museum. Zur Erinnerung an Ferd. Ochsenheimer. Rovart. L. Budapest **26** 1923 pp. 49–59.

2076.—Schmidt, E. Beiträge zur Kenntnis aussereuropäischen Zikaden. Beitrag VI–XIV. Arch. Naturg. Berlin **85** Abt. A Heft 7 (1919) 1920 pp. 100–120. [Hom.]

2077.—Schmidt, E. Beitrag zur Kenntnis der Zikadenfauna von Canton (China). Arch. Naturg. Berlin 85 Abt. A Heft 7 (1919) 1920 pp. 121–128. [Hom.]

2078.—Schmidt, E. Neue Fulgoriden. Soc. ent. Stuttgart 38 1923 pp. 17–18, 44. [Hom.]

2079.—Schmidt, M. Bemerkungen über Callichrominen (Col. Ceramb.). D. ent. Zs. Berlin 1923 pp. 272–276.

2080.—Schmidt, W. Zur Variabilität von *Arctia villica* L. Ent. Zs. Frankfort o. M. 37 1923 p. 40. [Lep.]

2081.—Schmitt-Auracher, A. Physiologisch-biologische Beobachtungen an den Raupen von *Euproctis chrysorrhoea* und verwandten Arten. Biol. Zentralbl. Leipzig 43 1923 pp. 225–243. [Lep.]

2082.—Schmitz, H. Über drei neue Phoridaenarten, nebst Bemerkung über die Identität der Gattungen *Parastenophora* Mall. und *Pseudostenophora* Mall. (Phoridae, Dipt.). Zool. Med. Leiden 6 1921, pp. 54–57.

2083.—Schmitz, H. Typenstudien an Phoridaen. Jaarb. Nat. Hist. Genootschap in Limburg 1920–1923 pp. 49–59. [Dipt.]

2084.—Schmitz, H. Zwei neue Phoridaen aus Australien und Brasilien. Ent. Ber. Ned. Ent. Vereen. The Hague 6 1923 pp. 188–192. [Dipt.]

2085.—Schneider, H. Die Haare und sonstige Chitingebilde der Kohlraupe (*Pieris brassicae* L.). Zool. Anz. Leipzig 56 1923 pp. 155–160 1 fig. [Lep.]

2086.—Schneider, J. S. Maalselvens insektafauna. II. Lepidoptera. Utgit efter forfatterens død av Johan Rygge. Tromsø Mus. Aarsh. 44 1921 59 pp. 2 pls.

2087.—Schnelle, H. Über den feineren Bau des Fettkörpers der Honigbiene. Zool. Anz. Leipzig 57 1923 pp. 172–179 figs. [Hym.]

2088.—Scholz, M. F. R. *Agathidium confusum* Bris. Ent. Blätter Berlin 19 1923 p. 93. [Col.]

2089.—Scholz, R. 6. Beitrag zur Kenntnis und Verbreitung paläarktischer Dytisciden (Col.). Ent. Blätter Berlin 19 1923 pp. 181–185.

2090.—Schouteden (H.). Nouvelles notes sur les Tingides du Congo Belge. Rev. zool. afr. Brussels 11 1923 pp. 82–110. [Hom.]

2091.—Schrader, F. A study of the chromosomes in three species of *Pseudococcus*. Arch. Zellforschg. Leipzig 17 1923 pp. 45–62 2 pls. [Hom.]

2092.—Schrader, F. The sex ratio and oogenesis of *Pseudococcus citri*. Zs. indukt. Abstammgslehre Berlin 30 1923 pp. 163–182 4 pls. [Hom.]

2093.—Schrader, F. The origin of the mycetocytes in *Pseudococcus*. Biol. Bull. Wood's Hole Mass. 45 1923 pp. 279–302 3 pls. [Hom.]

2094.—Schröder, O. Neue Formen von *Colias palaeno* L. var. *europome* Esp. aus dem südlichen Schwarzwald. Mitt. Badischen ent. Ver. Freiburg i. Br. 1 1923 pp. 12–13. [Lep.]

2095.—Schulthess, A. v. Ergebnisse der zoologischen Expedition Prof. F. Werner's nach dem angloägyptischen Sudan (Kordofan) 1904. VIII. Hymenoptera. II. Vespidae. Anz. Ak. Wiss. Wien 57 1920 pp. 285–286.

2096.—Schulthess, A. v. Schweizer Entomologen aus der ersten Hälfte des vergangenen Jahrhunderts. Schweizer ent. Anz. Zürich 1 1922 pp. 38–40, 46–49, 54–56, 61–62.

Schulthess, A. v. see Mayer & Schulthess.

2097.—Schultz, V. G. M. Die ersten Stände von *Agrot. culminicola* Stgr. Ent. Zs. Frankfort o. M. 37 1923 pp. 25–26, 30–31. [Lep.]

2098.—Schultze, A. & Aurivillius, C. Lepidoptera, III. Teil. Ergebni. Zwt. D. Z. Afr. Exped. 1910–1911, Leipzig 1 Lief. 17 1923 pp. 1113–1241 11 figs.

2099.—Schultze, E. A. Beiträge zur Kenntnis der Pedes spurii der Lepidopterenlarven. Arch. Naturg. Berlin 85 Abt. A. Heft 1 (1919) 1920 pp. 1–78 8 pls.

2100.—Schultze, W. A new Philippine Paussid, synonymous notes on *Pachyrrhynchus*, and a new species of the latter. Philipp. J. Sci. Manila 23 1923 pp. 77–81. [Col.]

2101.—Schultze, W. Eleventh contribution to the Coleoptera fauna of the Philippines. *Philipp. J. Sci. Manila* **23** 1923 pp. 595–607 1 pl.

2102.—Schultze, W. A monograph of the Pachyrrhynchid group of the Brachyderinae, Curculionidae; Part 1. The genus *Pachyrrhynchus* Germar. *Philipp. J. Sci. Manila* **23** 1923 pp. 609–673 6 pls. 3 tables.

2103.—Schumacher, F. Beiträge zur Kenntnis der märkischen Insektenfauna. Zusammenstellung der aus der Mark Brandenburg bis zum Jahre 1800 festgestellten Schmetterlingsarten. *Arch. Naturg. Berlin* **84** Abt. A Heft 12 (1918) 1920 pp. 51–100. [Lep.]

2104.—Schumacher, F. Nota. (Variabilität der *Coccinella 10-punctata* L.). *Arch. Naturg. Berlin* **84** Abt. A Heft 12 (1918) 1920 p. 101. [Col.]

2105.—Schumacher, F. Entomologisches aus dem Botanischen Garten zu Berlin-Dahlem, III. *SitzBer. Ges. natf. Freunde Berlin* **1921** pp. 81–83. [Hom.]

2106.—Schumacher, F. Beiträge zur Kenntnis der Gattung *Cicadatra* Kol. D. ent. Zs. Berlin **1923** pp. 227–235. [Hom.]

2107.—Schumacher, F. *Paracletus cimiciformis* Heyd., die Tetramorium-Wurzellaus. D. ent. Zs. Berlin **1923** pp. 401–410. [Hom.]

2108.—Schuster, A. Monographie der Coleopterengattung *Laena* Latreille. Verh. zool.-bot. Ges. Wien **66** 1916 pp. 495–629.

2109.—Schuster, A. Neue chinesische *Blaps* (Col. Tenebrionidae). Wiener ent. Ztg. **40** 1923 pp. 30–32.

2110.—Schuster, A. Neue paläarktische Tenebrioniden (Coleopt.). Wiener ent. Ztg. **40** 1923 pp. 156–162.

2111.—Schuurmans Stekhoven, Jr. J. H. De bloedzuigende Arthropoden van Nederlandsch Oost Indië. V. De bestrijding van luisenfliegen. Aanhangel: Enkele aanvullende opmerkingen omrent de anatomie van larve und imago. Buitenzorg 1923 40 pp. 1 pl. [Dipt.]

2112.—Schwarz, E. The reason why *Catacola* eggs are occasionally deposited on plants upon which the larva cannot survive; and a new variation (Lepid., Noctuidae). *Ent. News Philadelphia* **34** 1923 pp. 272–273.

2113.—Schwarz, E. A. & Barber, H. S. Descriptions of new species of Coleoptera. *Zoologica New York* **3** 1921 pp. 189–194 1 pl.

2114.—Schwarzer, B. Beiträge zur Kenntnis der Cerambyciden (Col.). D. ent. Zs. Berlin **1923** pp. 255–260.

2115.—Schweitzer, A. Ueber Kreuzungen zwischen *Lymantria dispar* L. und *Lymantria dispar* var. *japonica* Motsch. *Mitt. Entomologia Zürich* **1** 1915 pp. 27–53 1 pl. II. *Mitteilung* **2** 1916 pp. 121–133. III. *Mitteilung* **4** 1918 pp. 279–287. IV. *Mitteilung* **5** 1920 pp. 332–333. [Lep.]

2116.—Schwingenschuss, L. Eine neue Abart von *Erebia epiphron* Knoch. *Verh. zool.-bot. Ges. Wien* **64** 1914 pp. (170)–(171). [Lep.]

2117.—Schwingenschuss, L. Mitteilungen über eine Sammeltour in die Zentralkarpaten. *Verh. zool.-bot. Ges. Wien* **65** 1915 pp. (76)–(84) 2 figs. [Lep.]

2118.—Schwingenschuss, L. [Mitteilung neuer Aberrationen bei Lepidopteren.] *Verh. zool.-bot. Ges. Wien* **67** 1917 pp. (127)–(129) 1 fig.; **68** 1918 pp. (150)–(155). [Lep.]

2119.—Scott, H. List of Orthoptera and Neuroptera collected in the Eastern Pyrenees, with ecological notes. *Ent. Rec. London* **35** 1923 pp. 122–126, 146–149.

2120.—Scott, H. M. Observations on the habits and life-history of *Gallerucella nymphaea* (Coleoptera). *Trans. Amer. Microsc. Soc. Menasha Wis.* **43** 1924 pp. 11–16.

2121.—Seamans, H. L. An undescribed Anthomyiid in the Canadian National Collection (Diptera). *Canad. Ent. Orillia* **55** 1923 pp. 221–222.

2122.—Searle, J. The sticktight flea *Echidnophaga gallinacea*. *Vict. Nat. Melbourne* **40** 1923 p. 119 1 pl. [Siphon.]

- 2123.—Séguy, E. Diptères Anthomyides. (Faune de France, vol. 6). Paris, Lechevalier 1923 xi + 393 pp. 813 figs. [Dipt.]
- 2124.—Séguy, E. Histoire naturelle des moustiques de France. Paris, Lechevalier 1923 225 pp. 201 figs. [Dipt.]
- 2125.—Séguy, E. Etude sur le *Muscina stabulans* Fallén (Diptère). Bull. Mus. Hist. nat. Paris 1923 pp. 310–317 3 figs.
- 2126.—Séguy, E. Sur le *Cephalopsis titillator* Clark. Bull. Mus. Hist. nat. Paris 1923 pp. 387–390 3 figs. [Dipt.]
- 2127.—Séguy, E. Note sur les larves des *Muscina stabulans* et *assimilis* (Diptères). Bull. Mus. Hist. nat. Paris 1923 pp. 443–445 9 figs.
- 2128.—Séguy, E. Description d'Anthomyiaires nouveaux (Diptères). Ann. Soc. ent. France Paris 91 1923 pp. 359–368 4 figs.
- 2129.—Séguy, E. Remarques sur quelques moustiques. Ann. Soc. ent. France Paris 92 1923 pp. 205–207. [Dipt.]
- 2130.—Seiler, J. Neue Ergebnisse der Chromosomenforschung. Verh. Schweiz. natf. Ges. Aarau 102 pt. 2 1921 pp. 84–94.
- 2131.—Seiler, J. Die Parthenogenese der Psychiden. Zs. indukt. Abstammungslehre Berlin 30 1923 p. 286; 31 1923 pp. 1–99 3 pls. 12 figs. [Lep.]
- 2132.—Seitz, A. Der Mount Everest und die paläarktische Südgrenze. Ent. Rdsch. Stuttgart 40 1923 pp. 13–14, 17–19, 21–23, 25–26, 30–31, 33–34.
- 2133.—Seitz, A. Insektenleben in den Pyrenäen. Ent. Rdsch. Stuttgart 40 1923 pp. 34–36, 39–40, 43–44, 49–50.
- Seitz, A. see Andres & Seitz.
- 2134.—Seliskar, A. Die männlichen Duftorgane der Höhlenheuschrecke *Troglophilus*. Zool. Anz. Leipzig 57 1923 pp. 253–268 figs. [Orth.]
- 2135.—Sellman, E. & Lundblad, O. Om den i Sverige funna *Brychius*-arter. Ent. Tidskr. Stockholm 44 1923 pp. 215–223 3 figs. [Col.]
- 2136.—Semenov - Tian - Shanski, A. & Dobrzhanski, Th. Tres novae Coccinellidarum species e fauna Rossiac Asiatica (Coleoptera). Rev. russe Ent. Petrograd 18 1923 pp. 99–102.
- 2137.—Semichon, L. Sur les différences spécifiques dans les stigmates des larves de *Vespa* L. Bull. Soc. ent. France Paris 1923 pp. 170–171 2 figs. [Hym.]
- 2138.—Senior-White, R. Catalogue of Indian Insects. Part 2. Culicidae. Calcutta Supt. Govt. Ptg. 1923 124 pp. [Dipt.]
- 2139.—Senior-White, R. Catalogue of Indian Insects. Part 3. Bombyliidae. Calcutta Supt. Govt. Ptg. 1923 31 pp. [Dipt.]
- 2140.—Senior-White, R. A. The Muscidae Testaceae of the Oriental Region. Spolia Zeylanica Colombo 12 1923 pp. 294–314 11 pls. [Dipt.]
- 2141.—Senior-White, R. Notes on Indian Muscidae. Mem. Dept. Agric. India Calcutta Ent. Ser. 8 1923 pp. 35–52 4 pls.
- 2142.—Senior-White, R. Discovery of *Ascodipteron* in Ceylon. Nature London 112 1923 p. 206. [Dipt.]
- 2143.—Severin, H. C. Second Report upon the Membracidae of South Dakota. 14th Ann. Rept. S. Dakota State Ent. 1923 pp. 27–33 1 fig. [Hom.]
- 2144.—Severin, H. C. Report upon the Phasmoidea of S. Dakota. 14th Ann. Rept. S. Dakota State Ent. 1923 p. 34. [Orth.]
- 2145.—Severin, H. C. The Mantoidea of South Dakota. 14th Ann. Rept. S. Dakota State Ent. 1923 p. 35. [Orth.]
- 2146.—Shafer, G. D. The growth of dragonfly nymphs at the moult and between molts. Stanford Univ. Pubns. Biol. Sci. 3 1923 pp. 307–338 5 figs. [Odon.]
- 2147.—Shannon, R. C. A re-classification of the subfamilies and genera of North American Syrphidae (Diptera). Bull. Brooklyn Ent. Soc. 18 1923 pp. 17–21.
- 2148.—Shannon, R. C. A new *Microdon* from Bolivia (Diptera, Syrphidae). Insec. Insc. Mens. Washington D.C. 11 1923 pp. 80–81.

2149.—Shannon, R. C. Genera of Nearctic Calliphoridae (blowflies) with revision of the Calliphorini (Diptera). Insec. Insc. Mens. Washington D.C. **11** 1923 pp. 101–118.

2150.—Shannon, R. C. The pleural sclerites of Diptera. Canad. Ent. Orillia **55** 1923 pp. 219–220.

Shannon, R. C. see Matheson & Shannon.

2151.—[Shapinski, D. V.] Шапинский, Д. В. Notes orthopterologiques. Bull. Soc. ent. Moscou **2** no. 2 1923 pp. 57–69. [In Russian.]

2152.—Sheldon, W. G. The present values of the principal works on the Palaearctic Lepidoptera. Entomologist London **56** 1923 pp. 7–12.

2153.—Sheldon, W. G. *Peronea hastiana* L.: its distribution, habits, life-cycle and variation. Entomologist London **56** 1923 pp. 75–81, 100–104, 128–131, 149–153, 173–178, 197–202, 221–226, 269–271 1 pl. [Lep.]

2154.—Sheljuzhko, L. Lépidoptères nouveaux ou peu connus de la Sibérie. Ann. Soc. ent. France Paris **91** 1923 pp. 281–290 1 pl.

2155.—Sheppard, T. List of Papers bearing on Zoology . . . of British Isles issued during 1922. Brit. Ass. Report Corresp. Soc. 1923 pp. 515–578 [includes all papers on British Entomology].

2156.—Shestakov, A. Ad cognitionem specierum tribus Anomalonini (Hymenoptera, Ichneumonidae). Ann. Mus. zool. Acad. Sci. Russ. Petrograd **24** 1923 pp. 44–51.

2157.—Shestakov, A. De specie nova subspecieque parum cognita generis *Leucospis* F. (Hymenoptera, Chalcididae). Ann. Mus. zool. Acad. Sci. Russ. Petrograd **24** 1923 pp. 96–100 2 figs.

2158.—Shestakov, A. Revisio specierum palearcticarum subgeneris *Apriaptix* novi pertinentium (Hymenoptera, Crabronidae). Сборник Ярославского Государств. Университета. [Ann. Yaroslavl Govt. Univ.] Yaroslavl pt. 2 1923 pp. 101–115.

2159.—Sicard, A. Coccinellides nouveaux de l'Afrique du Nord. Bull. Soc. Hist. nat. Afr. N. Algiers **14** 1923 pp. 78–80. [Col.]

2160.—Sich, A. Observations on the family Coleophoridae.—The case. Ent. Rec. London **35** 1923 pp. 105–113. [Lep.] [Continuing.]

2161.—Silva Figueroa, C. Revisión de las especies chilenas del género *Brenthis*, Hübner. Rev. chil. Hist. nat. Santiago **25** (1921) 1923 pp. 462–470 4 figs. [Lep.]

2162.—Silvestri, F. Thysanura, Termitidae, and Embiidae collected in Mesopotamia and N.W. Persia by W. Edgar Evans, B.Sc., late Capt. R.A.M.C. and Dr. P. A. Buxton. Trans. Ent. Soc. London 1923 pp. 258–262 4 pls.

2163.—Silvestri, F. The Termites of Barkuda Island. Rec. Ind. Mus. Calcutta **25** 1923 pp. 221–232 8 figs. [Isopt.]

2164.—Silvestri, F. Descriptiones Termitum in Anglorum Guiana reperitorum. Zoologica New York **3** 1923 pp. 308–321 5 pl. [Isopt.]

2165.—Silvestri, F. Due nuovi generi e una nuova specie di Machilidae della Spagna. Pub. Acad. Ciencias Saragossa <sup>Rev</sup> 1923 pp. 123–131 5 figs. [Thysanura.] <sup>Lvi(1921)</sup>

2166.—Silvestri, F. Contribuzioni alla conoscenza degli insetti del Nocciolo. Boll. Lab. Zool. gen. & agrar. R. Scuola sup. Agric. Portici **16** 1923 pp. 221–301 50 figs. 2 pls.

2167.—Simmons, A. Life-history of *Pararge hiera*. Ent. Rec. London **35** 1923 pp. 34–35. [Lep.]

Simmons, P. see Larson & Simmons.

2168.—Sinton, J. A. Notes on some Indian species of the genus *Phlebotomus*. Part II. *Phlebotomus squamipleuris*, Newstead 1912. Ind. J. Med. Res. Calcutta **11** 1923 pp. 65–78 2 tables 2 pls.

2169.—[Sirotinina, O. N.] Сиротинина, О. Н. Список водных клопов из окрестностей гор. Мурома. [List of water-bugs from the vicinity of the town of Murom.] Arb. Biol. Okat-Sta. (Murom Russland) **2** 1923 pp. 93–96. [Hem.]

- 2170.—**Sjöstedt**, Y. Acridoidea. Zoological Results of the Swedish Expedition to Central-Africa, 1921. Insecta I. Ark. Zool. Stockholm **15** no. 6 1923 39 pp. 1 pl. [Orth.]
- 2171.—**Sjöstedt**, Y. Revision du genre *Tapesia* Bol. Ark. Zool. Stockholm **15** no. 16 1923 18 pp. 5 pls. [Orth.]
- 2172.—**Skinner**, H. A new genus and species of *Sphinx* (Lepid.). Ent. News Philadelphia **34** 1923 p. 138.
- 2173.—**Skinner**, H. & **Ramsden**, C. T. Annotated list of the Hesperiidae of Cuba. Proc. Acad. Nat. Sci. Philadelphia **75** 1923 pp. 307–321. [Lep.]
- 2174.—**Skinner**, H. & **Williams**, Jr., R. C. On the male genitalia of the Hesperiidae of North America. Trans. Amer. Ent. Soc. Philadelphia **49** 1923 pp. 129–153 44 figs. [Lep.]
- 2175.—**Sloane**, T. G. Studies in Australian Entomology. XVIII. New genera and species of Carabidae. Proc. Linn. Soc. N.S.W. Sydney **48** 1923 pp. 17–39. [Col.]
- 2176.—**Sloane**, T. G. The Classification of the Family Carabidae. Trans. Ent. Soc. London **1923** pp. 234–250c. [Col.]
- 2177.—**Smirnov**, E. Ein Beitrag zur Kenntnis der Gattung *Helophilus* Meig. (= *Tubifera* Mg.). Zool. Anz. Leipzig **56** 1923 pp. 81–87 figs. [Dipt.]
- 2178.—**Smith**, M. R. The life-history and habits of *Bicyrtes quadrifasciata*, Say (Order Hymenoptera, Family Bembicidae). Ann. Ent. Soc. Amer. Columbus Ohio **16** 1923 pp. 238–246.
- 2179.—**Smith**, M. R. Two new varieties of ants (Hymen.: Formicidae). Ent. News Philadelphia **34** 1923 pp. 306–308.
- 2180.—**Smith**, M. R. Two new Mississippi ants of the subgenus *Colobopsis*. Psyche Boston **30** 1923 pp. 82–88. [Hym.]
- 2181.—**Smith**, R. C. The life histories and stages of some Hemerobiids and allied species (Neuroptera). Ann. Ent. Soc. Amer. Columbus Ohio **16** 1923 pp. 129–151 3 pls.
- 2182.—**Smith**, R. H. The Clover Aphis: Biology, Economic Relation-  
(N-12519 j) q ships and Control. Idaho Agric. Expt. Sta. Moscow Ida. Res. Bull. **3** 1923 pp. 75 35 figs. [Hom.]
- 2183.—**Smith**, R. H. Technique in studying by dissection the internal anatomy of small insects. Ann. Ent. Soc. Amer. Columbus Ohio **16** 1923 pp. 277–278.
- 2184.—**Snyder**, T. E. Three new Termites from the Canal Zone, Panama. Proc. Ent. Soc. Washington **25** 1923 pp. 126–131 1 fig. [Isopt.]
- 2185.—**Snyder**, T. E. A new *Glyptotermes* from Porto Rico. Proc. Ent. Soc. Washington **25** 1923 pp. 89–93 1 pl. [Isopt.]
- 2186.—**Snyder**, T. E. A new *Reticulitermes* from the Orient. J. Washington Acad. Sci. **13** 1923 pp. 107–109. [Isopt.]
- Snyder**, T. E. see Dietz & Snyder.
- 2187.—**Solari**, A. & F. Sul genere *Solariola* Flach (Col. Cureul.). Boll. Soc. ent. ital. Genoa **55** 1923 pp. 51–57.
- 2188.—**Sonan**, J. On some Formosan butterflies viewed from the standpoint of their geographical distribution. Konchu Sekai [Insect World] Gifu **25** 1921 pp. 43–48. [In Japanese.] [English abstract in Jap. J. Zool. Tokyo **1** 1922 pp. (12–13).]
- 2189.—**Sonan**, J. On the food of some species of Asopinae with notes on the habit of *Cazira verrucosa* Westw. and *Cantheconidea furcellata* Wolf. Konchu Sekai [Insect World] Gifu **25** 1921 pp. 361–368. [In Japanese.] [English abstract in Jap. J. Zool. Tokyo **1** 1922 p. (13).] [Hom.]
- 2190.—**Sonan**, J. On the Cicadidae in Formosa. Trans. Nat. Hist. Soc. Formosa **11** 1921 pp. 163–172. [In Japanese.] [English abstract in Jap. J. Zool. Tokyo **1** 1922 p. (11).] [Hom.]
- 2191.—**Sønderup**, H. P. S. Smas-sommefugle. [Catalogue of Microlepidoptera new to the Danish fauna.] Flora og Fauna Copenhagen **1923** pp. 39–40. [In Danish.]
- 2192.—**Spaeth**, F. Ueber die paläarktischen Cassiden mit besonderer Berücksichtigung jener von Asien. Verh. zool.-bot. Ges. Wien **64** 1914 pp. (128)–(147). [Col.]

- 2193.—Spaeth, F. Die *Hoplionota*-Arten des königl. Museums in Berlin. Verh. zool.-bot. Ges. Wien **64** 1914 pp. 290–298. [Col.]
- 2194.—Spaeth, F. Madagassische Schildkäfer des Luxemburger Naturhistorischen Museums. Zur Kenntnis der Cassidini von Madagaskar. Gesellsch. Luxemb. Naturfreunde Festschrift zur Feier des 25-jährigen Bestehens 1890–1915 **1915** pp. 127–154. [Col.]
- 2195.—Spaeth, F. Ueber *Batonota* Hope (Col. Cassid.). Wiener ent. Ztg. **40** 1923 pp. 65–76.
- 2196.—Spandl, H. Beobachtungen an Larven von *Phryganea grandis* L. und *Oxyethira costalis* Curt. Zs. wiss. Insektenbiol. Berlin **18** 1923 pp. 357–358. [Neur.]
- 2197.—Spärck, R. Beiträge zur Kenntnis der Chironomidenmetamorphose. I–IV. Ent. Medd. Copenhagen **14** 1922–1923 pp. 32–109 12 figs. [Dipt.]
- 2198.—Spegazzini, C. Instrucciones para la recolección de insectos especialmente para los estudios laboulbeniológicos. Rev. chil. Hist. nat. Santiago **24** 1920 pp. 107–110.
- 2199.—Speiser, P. Aethiopische Dipteren. Wiener ent. Ztg. **40** 1923 pp. 81–99.
- 2200.—Spessivtseff, P. Zweiter Beitrag zur Kenntnis der Borkenkäferfauna Schwedens. Ent. Tidskr. Stockholm **44** 1923 pp. 200–214 4 figs. [Col.]
- 2201.—Spessivtseff, P. Bidrag till Känndomen om Bruna Öronvivelns (*Otiorrhynchus ovatus* L.). Morfologi och Biologi. Medd. Stat. Skogsförsk. anst. Stockholm **20** 1923 pp. 241–260 10 figs. [Col.]
- 2202.—Speyer, E. R. Researches upon the larch Chermes (*Cnaphalodes strobilobius* Kalt.), and their bearing upon the evolution of the Chermesinae in general. Phil. Trans. R. Soc. London (B) **212** 1923 pp. 111–146 2 pls. 12 figs. [Hom.]
- 2203.—Speyer, E. R. Notes upon the habits of Ceylonese ambrosia-beetles. Bull. Ent. Res. London **14** 1923 pp. 11–23 6 pls. [Col.]
- 2204.—Speyer, W. Ueber die Lebensdauer des Apfelblütenstechers (*Anthonomus pomorum* L.) und die Entwicklung seiner Geschlechtsorgane. Zs. Schädlingsbekämpfung Berlin **1** 1923 pp. 68–70 4 figs. [Col.]
- 2205.—Spiller-Splichal, C. Erweitertes Verbreitungsgebiet der Histeriden. (Coleopt.). Ent. Anz. Vienna **8** 1923 p. 102.
- 2206.—Spitz, R. Eine neue Geometridenform. Verh. zool.-bot. Ges. Wien **67** 1917 pp. (48)–(49). [Lep.]
- 2207.—Spuler, A. North American genera and subgenera of Dipterous family Borboridae. Proc. Acad. Nat. Sci. Philadelphia **75** 1923 pp. 369–378. [Dipt.]
- Srinivasa Rao, H. see Dover & Srinivasa Rao.
- 2208.—Stackelberg, A. v. *Cynorrhina nitens* sp. nov. (Syrphidae; Dipt.). Supplementa ent. Berlin **9** 1923 pp. 22–23.
- 2209.—Stadtmann-Averfeld, H. Beiträge der Stechmücken-Larven. D. ent. Zs. Berlin **1923** pp. 105–152 34 figs. [Dipt.]
- 2210.—Stäger, R. Beitrag zur Lebensgeschichte der Fliedermotte (*Xanthospilapteryx syringella* F.). Mitt. Entomologia Zürich **6** 1923 pp. 368–400. [Lep.]
- 2211.—Stäger, R. Einige Beobachtungen an *Rhaphidia ophiopsis* Schm. Soc. ent. Stuttgart **38** 1923 p. 30. [Neur.]
- 2212.—Stäger, R. Gibt es Insekten, die von Ameisen nicht verzehrt werden? Soc. ent. Stuttgart **38** 1923 pp. 33–35.
- 2213.—Stäger, R. Aus dem Leben eines hochalpinen Wollraupenspinners. Soc. ent. Stuttgart **38** 1923 pp. 41–43. [Lep.]
- 2214.—Stäger, R. Ergebnisse meiner neuesten Beobachtungen an *Formicoxenus nitidulus* Nyl. Zs. wiss. Insektenbiol. Berlin **18** 1923 pp. 290–292. [Hym.]
- 2215.—Stäger, R. Resultate meiner Beobachtungen und Versuche an *Aphaenogaster testaceopilosa* Lucas, *spinosa* Emery, var. *nitida* Emery. Zs. wiss. Insektenbiol. Berlin **18** 1923 pp. 351–356. [Hym.]

2216.—**Stammer, H. J.** Über einige Besonderheiten im Bau des Vorderdarmes bei Tabanideularven. Verh. D. zool. Ges. Berlin **28** 1923 pp. 81–83. [Dipt.]

2217.—**Standfuss, M.** Beiträge zu der vorstehenden Arbeit von Collega A. Schweizer über Kreuzungen von *Lymantria dispar* L. und *Lymantria dispar* var. *japonica* Motsch. Mitt. Entomologia Zürich **1** 1915 pp. 54–71 3 figs. [Lep.]

2218.—**Standfuss, R.** *Eriogaster arbusculae* Freyer bona species. Mitt. Entomologia Zürich **1** 1915 pp. 72–95 2 pls. [Lep.]

**Staniland, L. N.** see Buckhurst, Staniland & Watson.

2219.—**Stauder, H.** Beiträge zur Kenntnis der Makrolepidopteren-Fauna der adriatischen Küstengebiete. Boll. Soc. Adriat. Sci. nat. Trieste **25** 1911 pp. 93–120 pls; **27** 1912 pp. 105–166 pls.

2220.—**Stauder, H.** Neue Lepidopterenformen. Verh. zool.-bot. Ges. Wien **70** 1920 pp. (177)–(178).

2221.—**Stauder, H.** *Argynnis lathonia shiljachkoi* Stdr. (Lep.). D. ent. Zs. Berlin **1923** pp. 513–514.

2222.—**Stauder, H.** *Larentia bicolorata* Hufn. bei Innsbruck. Intern. ent. Zs. Guben **17** 1923 pp. 92–93. [Lep.]

2223.—**Stauder, H.** Zwei neue Formen in *Cidaria designata* Rott. Intern. ent. Zs. Guben **17** 1923 pp. 113–114. [Lep.]

2224.—**Stauder, H.** Lepidoptera aus Unteritalien, I. Soc. ent. Stuttgart **38** 1923 pp. 5–7, 10–11, 14–16, 19–20, 23–24 27–28, 30–32, 35–40, 43–44, 46–48.

2225.—**Stauder, H.** Neue Schmetterlingsformen aus meiner Sammlung. Ent. Anz. Vienna **3** 1923 pp. 1–7. [Lep.]

2226.—**Stauder, H.** Der Grundton im Farbenkleide von *Zygaena transalpina* Esp. Ent. Anz. Vienna **3** 1923 pp. 17–21. [Lep.]

2227.—**Stauder, H.** Geschlechtswitterung bei *Oxyja trigotephra calabria* Str. Ent. Anz. Vienna **3** 1923 pp. 31–33. [Lep.]

2228.—**Stauder, H.** Neue illyro-adriatische Lepidopteren-Formen (Noctuidae). Ent. Anz. Vienna **3** 1923 pp. 43–44.

2229.—**Stauder, H.** Beiträge zur Sammeltechnik und Biologie begehrter Arten und Formen von Lepidopteren; Beschreibung berühmter Flugplätze. Ent. Anz. Vienna **3** 1923 pp. 82–86, 93–96, 103–108, 119–121, 125–129, 139–144.

2230.—**Stauder, H.** Die Schmetterlingsfauna der illyro-adriatischen Festland- und Inselzone. (Faunula Illyro-Adriatica.) Zs. wiss. Insektenbiol. Berlin **18** 1923 pp. 10–18, 58–68, 106–114, 187–202, 253–267, 317–327, 1 pl. 12 figs. [Lep.]

2231.—**Stearns, L. A.** Hemiptera of Connecticut: Cercopidae. Conn. N. H. Surv. Hartford Bull. **34** 1923 pp. 206–238 1 pl. 3 figs.

2232.—**Steck, T.** Seltene schweizerische Hymenopteren. Verh. schweiz. natf. Ges. Aarau **102** pt. 2 1921 pp. 158–159.

2233.—**Stein, P.** Die Anthomyiden-gattungen der Welt, analytisch bearbeitet, nebst einem kritisch-systematischen Verzeichnis aller aussereuropäischen Arten. Arch. Natg. Berlin Abt. A **83** Heft 1 (1917) 1919 pp. 85–178 2 figs. [Dipt.]

2234.—**Stein, P.** Nordamerikanische Anthomyiden. 2. Beitrag. Arch. Natg. Abt. A **84** Heft 9 (1918) 1920 pp. 1–106. [Dipt.]

2235.—**Steinbeck, C. A.** The cocoon of the cup-moth. - Austr. Nat. Sydney **5** 1923 pp. 73–74.

2236.—**Stenius, G.** Ueber zwei *Philonthus*-Arten. *Ph. setosus* J. Sahlb. und *Ph. subvirescens* Thoms. (Col. Staph.). Notulae ent. Helsingfors **3** 1923 pp. 44–45.

2237.—**Steinke, G.** Die Stigmen der Käferlarven. Arch. Natg. Berlin **85** Abt. A Heft 7 (1919) 1920 pp. 1–58 pls. figs. [Col.]

2238.—**Stephan, J.** *Hepialus humuli* L., die Geistermotte. Soc. ent. Stuttgart **38** 1923 pp. 45–46. [Lep.]

2239.—**Stephan, J.** *Brephos* O. Intern. ent. Zs. Guben **17** 1923 pp. 84–85. [Lep.]

- 2240.—Stephan, J. Die Tagschmetterlinge der Grafschaft Glatz. D. ent. Zs. Iris Dresden **37** 1923 pp. 20–50. [Lep.]
- 2241.—Stephensen, K. Grönlands Dyreverden. Medd. Grönl. Copenhagen **60** 1921 pp. 57–72 figs. [Note on Insects of Greenland.]
- 2242.—Stichel, H. Neues über Genus *Narope* Westw. N. Beitr. system. Insektenk. Berlin **1** 1916 pp. 7–8. [Lep.]
- 2243.—Stichel, H. *Napaea zikani*, nov. spec. (Lep. Riod.). N. Beitr. system. Insektenk. Berlin **2** 1923 p. 134.
- 2244.—Stichel, H. Beiträge zur Kenntnis der Riodinidenfauna Südamerikas. III, IV. Minas Geraes. Zs. wiss. Insektenbiol. Berlin **18** 1923 pp. 1–9 5 figs., 268–283 & 305–316.
- 2245.—Stichel, H. Kolumbische *Heliconius* (Lep., Rhop.). D. ent. Zs. Berlin **1923** pp. 260–270.
- 2246.—Stichel, W. Zur Phylogenetisierung eines geologisch jungen Formenkreises der Käfer, der Ditominen (Carab. Harpal.). Zs. wiss. Insektenbiol. Berlin **18** 1923 pp. 41–50, 81–100, 145–162, 209–242 2 pls. 1 map. [Col.]
- 2247.—Stickney, F. S. The head-capsule of Coleoptera. Illinois Biol. Monogr. Urbana **8** 1923 pp. 1–104 26 pls.
- 2248.—Stipan, F. *Lym. monacha*. Ent. Zs. Frankfort o. M. **37** 1923 p. 40. [Lep.]
- 2249.—Stirling, F. Southern migration of butterflies. Florida Ent. Gainesville **7** 1923 pp. 8–9.
- 2250.—Stockl, A. Zwei seltene Aberrationen aus der Gattung *Argynnus* F. Polskie Pismo Ent. Lemberg **2** 1923 pp. 82–83. [Lep.]
- 2251.—Stolz, H. Ueber die Käferfauna des Monte Cavallo in den Venetianer Alpen. Verh. zool.-bot. ges. Wien **65** 1915 pp. 238–254 3 figs. [Col.]
- 2252.—Strand, E. Der norwegische Naturforscher Hans Ström (1726–1797), und seine zoologischen Schriften. Ein Blatt aus der Geschichte der norwegischen Zoologie. Arch. Natg. Berlin Abt. A **83** Heft 6 (1917) 1919 pp. 27–49.
- 2253.—Strand, E. Meine zoologischen (exclus. entomologischen) Publikationen. 1897–1918, nebst Nachtrag zum Verzeichnis meiner entomologischen Publikationen. Arch. Natg. Berlin Abt. A **83** Heft 7 (1917) 1919 pp. 24–36.
- 2254.—Strand, E. Die zoolog. Werke von Pontoppidan (1753), Leem (1767) und Wilse (1779, 1790–1792). Aus der Geschichte der norwegischen Zoologie. Arch. Natg. Berlin Abt. A **83** Heft 7 (1917) 1919 pp. 150–156.
- 2255.—Strand, E. H. Sauter's Formosa-Ausbeute: Noctuidae I. Arch. Natg. Berlin Abt. A **83** Heft 10 (1917) 1919 pp. 129–162. [Lep.]
- 2256.—Strand, E. Über einige Apidae des Deutschen Entomologischen Museums. Arch. Natg. Berlin Abt. A **83** Heft 11 (1917) 1919 pp. 57–71. [Hym.]
- 2257.—Strand, E. Johannes Gistel und seine zoologischen Schriften. Ein Blatt aus der Geschichte der Zoologie. Arch. Natg. Berlin Abt. A **83** Heft 11 (1917) 1919 pp. 124–149.
- 2258.—Strand, E. H. Sauter's Formosa-Ausbeute: Noctuidae II nebst Nachträgen zu den Familien Arctiidae, Lymantriidae, Notodontidae, Geometridae, Thyrididae, Pyralidae, Tortricidae, Gelechiidae und Oecophoridae. Arch. Naturg. Berlin **84** Abt. A Heft 12 (1918) 1920 pp. 102–197. [Lep.]
- 2259.—Strand, E. Beiträge zur Lepidopterenfauna Norwegens und Deutschlands. Arch. Naturg. **85** Abt. A Heft 4 (1919) 1920 pp. 1–82.
- 2260.—Strand, E. Beiträge zur Kenntnis der Verbreitung und Formen exotischer Heteroceren, insbesondere Pyralididen, auf Grund von Material in Deutschen Entomologischen Museum. Arch. Naturg. Berlin **85** Abt. A Heft 12 (1919) 1920 pp. 114–166. [Lep.]
- 2261.—Strand, E. Zur Coleopterenfauna Norwegens. Arch. Natg. Berlin **89** 1923 Abt. A Heft 4 pp. 186–187.
- 2262.—Strohmeyer, H. Die Morphologie des Chitinskeletts der Platypodiden. Arch. Naturg. Berlin Abt. A **84** Heft 7 (1918) 1920 pp. 1–42 figs. [Col.]

2263.—**Stumper, R.** Zur Kenntnis des Polymorphismus der Formiciden. Bull. Soc. Nat. Luxembourg **28** 1918 pp. 18–24 7 figs. [Hym.]

2264.—**Stumper, R.** Pages myrmécologiques. I. *Formicoxenus nitidulus* Nyl. Bull. Soc. Nat. Luxembourg **28** 1918 pp. 73–82 3 figs. [Hym.]

2265.—**Stumper, R.** Zur Ontogenese der Ameisenkolonien. 1. Beitrag. Natürliche Koloniegründungen. Arch. Natg. Berlin Abt. A **83** Heft 3 & 7 (1917) 1919 pp. 1–10 & 137–141 figs. [Hym.]

2266.—**Stumper, R.** Ueber einige Anomalien des Ameisenlebens. Arch. Naturg. Berlin **85** Abt. A Heft 5 (1919) 1920 pp. 184–191. [Hym.]

2267.—**Stumper, R.** Untersuchungen über die Psychologie der Ameisen. Bull. Soc. Nat. Luxembourg **30** 1920 pp. 19–26, 51–59. [Hym.]

2268.—**Stumper, R.** L'acide formique. Bull. Soc. Nat. Luxembourg **31** 1921 pp. 174–187. [Hym.]

2269.—**Stumper, R.** Nouvelles recherches sur le venin des fourmis. C.R. Acad. Sci. Paris **176** 1923 pp. 330–332. [Hym.]

2270.—**Stumper, R.** Sur la composition chimique des nids de l'*Apicotermes occultus* Silv. C.R. Acad. Sci. Paris **177** 1923 pp. 409–411. [Isopt.]

2271.—**Stumper, R.** L'établissement des nouvelles colonies chez les fourmis. Ann. Sci. nat. (Zool.) Paris (10) **6** 1923 pp. 95–105 1 fig. [Hym.]

2272.—**Stumper, R.** Etudes sur les fourmis. Bull. Soc. ent. Belg. Brussels **5** 1923 pp. 29–31, 38–39, 133–136. [Hym.]

2273.—**Sturtevant, A. H.** New species and notes on synonymy and distribution of Muscidae Acalyptratae (Diptera). Amer. Mus. Novit. New York **76** 1923 pp. 1–12 2 figs.

2274.—**Surcouf, J. M. R.** Deuxième note sur les conditions biologiques du *Stomoxys calcitrans* L. Bull. Mus. Hist. nat. Paris **1923** pp. 168–172. [Dipt.]

2275.—**Surcouf, J. M. R.** Note sur un Diptère à vie larvaire littorale, *Tabanus (Ochrops) seurati*, n. sp. Bull. Soc. ent. France Paris **1922** 1923 pp. 297–299.

2276.—**Surcouf, J. M. R.** Note synonymique sur un Diptère piqueur de l'Inde. Bull. Soc. ent. France Paris **1923** pp. 196–197.

**Svenson, H. K.** see Mavor & Svenson.

2277.—**Swett, L. W.** *Xanthotype crocataria* Fabricius. Lepidopterist Salem **2** 1918 pp. 38–39, 41–44, 73–80, 86–90 2 pls. [Lep.]

2278.—**Swett, L. W.** Some new Geometrids. Lepidopterist Salem **3** 1920 pp. 123–125.

2279.—**Swett, L. W. & Cassino, S. E.** Some new Geometrids. Lepidopterist Salem **3** 1919 pp. 105–110, 113–114, 128–133.

**Swett, L. W.** see Cassino & Swett.

2280.—**Swezey, O. H.** The leaf-miners of *Pipturus* (Lepidoptera). Proc. Hawaiian Ent. Soc. Honolulu **5** 1922 1923 pp. 293–296.

2281.—**Swinhoe, C.** A revision of the genera of the family Liparidae. Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 47–97, 289–304, 400–442. [Lep.]

2282.—**Szabó, J.** A *Myrmecophila acervorum* himjéröl. [On the male of *Myrmecophila acervorum*.] Allatt. Közlem. Budapest **11** 1912 pp. 116–125 5 figs.

2283.—**Szabó, J.** Magyarorság rabszolgatató és elősködő hangyái. [Ungarns sklavenhaltende und parasitische Ameisen.] Allatt. Közlem. Budapest **13** 1914 pp. 93–107 7 figs. [Hym.] [Summary in German p. 149.]

2284.—**Szabó-Patay, J.** Adatok a hangyásztücsök életmódjának ismertetéhez. [Beiträge zur Kenntnis der Lebensweise der Ameisengrille.] Allatt. Közlem. Budapest **15** 1916 pp. 157–162 1 fig. (Summary in German p. 204.) [Orth.]

2285.—**Szabó-Patay, J.** Über den Bau und Funktion des Respirationsapparates von *Aphelochirus*. Allatt. Közlem. Budapest **17** 1918 pp. 48–66, 94 15 figs. [Hem.]

2286.—**Szilády, Z.** Die Artmerkmale der *Chrysops*-Arten. Allatt. Közlem. Budapest **17** 1918 pp. 119–134, 161 3 figs. [Dipt.]

2287.—Szilády, Z. Revision der palaearktischen *Chrysops*-Arten (Diptera) nebst anatomischen und phylogenetischen Bemerkungen. Arch. Natg. Berlin Abt. A **83** Heft 4 (1917) 1919 pp. 85–135 3 pls. 37 figs.

2288.—Szilády, Z. Wärme speichernde und ablenkende Farben. Allatt. Közlem. Budapest **19** 1920 pp. 1–28, 43–44. [Dipt.]

2289.—Szilády, Z. Über die Stechfliege und deren Verwandte. Allatt. Közlem. Budapest **20** 1921 pp. 51–58, 92. [Dipt.]

2290.—Szilády, Z. Verzeichniss meiner Insekten - Ansammlungen in Ungarn V. Orthoptera. Rovart. L. Budapest **26** 1922 pp. 7–9.

Taijan, L. see Porak & Taijan.

2291.—Takahashi, R. The metamorphosis of the Thysanoptera with a note on that of the Coccoidea. Dobuts. Z. Tokyo **33** 1921 pp. 80–85 2 figs. [In Japanese.] [Abstract in Jap. J. Zool. Tokyo **1** 1922 pp. (7–8).]

2292.—Takahashi, R. On the ecology of the Corrodentia. Dobuts. Z. Tokyo **33** 1921 pp. 173–180 2 figs. [In Japanese.] [Abstract in Jap. J. Zool. Tokyo **1** 1922 p. (8).]

2293.—Takahashi, R. Observations on asymmetry in insects. Dobuts. Z. Tokyo **33** 1921 pp. 337–342. [In Japanese.] [Abstract in Jap. J. Zool. Tokyo **1** 1922 pp. (2–3).]

2294.—Takahashi, R. Japanese Aphididae, I. Taihoku, Formosa **1921** pp. 19–31 figs.

2295.—Takahashi, R. Some problems concerning the wings of Insects. 1921. [Abstract in Jap. J. Zool. Tokyo **1** 1922 pp. (3–4).]

2296.—Takahashi, R. Observations on Hydrophilidae. Dobuts. Z. Tokyo **34** 1922 pp. 691–700 2 figs. [In Japanese.] [Col.]

2297.—Takahashi, R. Origin and phylogeny of aquatic life among Insects. Dobuts. Z. Tokyo **34** 1922 pp. 948–955. [In Japanese.]

2298.—Takahashi, R. Aphididae of Formosa. Parts 1 & 2. Govt. Res. Inst. Taihoku Formosa 1921 97 pp. 14 pls.; 1923 173 pp. 9 pls. [Hom.]

2299.—Takahashi, R. Life-cycles and appearance of winged forms in Aphidiidae. Dobuts. Z. Tokyo **35** 1923 pp. 217–225. [In Japanese.] [Abstract in Rev. App. Ent. London Ser. A **xii** 1924 p. 139.] [Hom.]

2300.—Takahashi, R. Observations on the Ochteridae. Bull. Brooklyn Ent. Soc. **18** 1923 pp. 67–68. [Hem.]

2301.—Takahashi, S. On the proportional body-lengths of insects in several stages of development. Konchu Sekai [Insect World] Gifu **25** 1921 pp. 405–409. [In Japanese.] [Abstract in Jap. J. Zool. Tokyo **1** 1922 p. (15).]

2302.—Takeuchi, K. Life histories of some Japanese Chalastogastra with description of new species. I. Konchu Sekai [Insect World] Gifu **25** 1921 pp. 395–401 1 fig. [Hym.]

2303.—Takeuchi, K. A list of sawflies collected by Mr. T. Esaki from Saghalien with description of a new species. Konchu Sekai [Insect World] Gifu Japan **27** 1923 pp. 9–11. [Hym.]

2304.—Takeuchi, K. On the Tenthredinoidea of Formosa. Trans. Nat. Hist. Soc. Formosa **13** 1923 pp. 39–46. [Not seen]. [Hym.]

2305.—Tams, W. H. T. Description of a new species of the genus *Chrysopysche* (Lasiocampidae). Entomologist London **56** 1923 p. 196. [Lep.]

2306.—Tarel, R. Note sur une ab. bleue inédite de *Cicindela gallica*. Brullé. Misc. ent. Castanet-Tolosan **27** 1923 p. 18. [Col.]

2307.—Tempère, G. Note sur "Cyrtaspis scutata" Charpentier (Orthoptère-Locustaire). Proc.-verb. Soc. linn. Bordeaux **75** 1923 pp. 76–81.

2308.—Teodoro, G. Sugli apparati di coaptazione negli Emitteri. Boll. Soc. ent. ital. Genoa **55** 1923 pp. 58–61. [Hem.]

2309.—Terao, A. A preliminary note on the structure of Hancock's gland of *Oecanthus longicauda* Matsumura. Annot. Zool. Jap. **10** 1921 pp. 41–44 2 figs. [Orth.]

2310.—Theobald, F. V. New species of British Aphides. Ent. Mo. Mag. London **59** 1923 pp. 23–28 3 figs. [Hom.]

2311.—Theobald, F. V. Aphides on the yellow horned-poppy (*Glaucium luteum*). Ent. Mo. Mag. London 59 1923 pp. 102–106 4 figs. [Hom.]

2312.—Theobald, F. V. A new genus and two new species of Aphides from Ross-shire. Scot. Nat. Edinburgh 1923 pp. 19–20 5 figs. [Hom.]

2313.—Theobald, F. V. The Aphides attacking cereals in Britain. S.E. Agric. Coll. Wye Kent Bull. 2 1923 18 pp. 8 figs. [Hom.]

2314.—Theobald, F. V. Two Aphides or plant-lice of economic importance new to Great Britain. S.E. Agric. Coll. Wye Kent Bull. 3 1923 11 pp. 5 figs. [Hom.]

2315.—Theobald, F. V. New Aphididae found in Egypt. Bull. Soc. R. ent. Egypte Cairo 1922 1923 pp. 39–80 13 figs. [Hom.]

2316.—Theobald, F. V. & Walton, C. L. A preliminary list of the Aphididae of North Wales. Ann. Rep. & Proc. Lancs. & Ches. Ent. Soc. Liverpool 45–46 1923 pp. 52–64 2 figs. [Hom.]

2317.—Théry, A. Description d'un genre nouveau de la famille des Buprestides tribu des Sphenopterini. Bull. Soc. ent. France Paris 1923 pp. 94–99 2 figs.

2318.—Théry, A. Etudes sur les Buprestides (Troisième Partie). Ann. Soc. ent. Belg. Brussels 62 1923 pp. 193–270. [Col.]

2319.—Théry, A. Remarques sur les genres alliés à *Melobasis* (Col. Buprestidae) et descriptions d'espèces nouvelles de la Malaisie. An. Mus. civ. Stor. nat. Genoa 51 1923 pp. 51–70.

2320.—Théry, A. Descriptions de nouvelles espèces de Buprestides. An. Mus. civ. Stor. nat. Genoa 51 1923 pp. 109–113 1 fig. [Col.]

2321.—Théry, A. Note on the genus *Synechocera*, with description of a new species. Proc. Linn. Soc. N.S.W. Sydney 48 1923 pp. 517–518 1 fig. [Col.]

2322.—Thienemann, A. Die Metamorphose der Chironomidengattungen *Camptocladius*, *Dyscamptocladius* und *Phaenocladius* mit Bemerkungen über

die Artdifferenzierung bei den Chironomiden überhaupt. Arch. Hydrobiol. Stuttgart Suppl. vol. 2 1921 pp. 809–850 23 figs. [Dipt.]

2323.—Thienemann, A. Geschichte der Chironomus-Forschung von Aristoteles bis zur Gegenwart. D. ent. Zs. Berlin 1923 pp. 515–540 3 pls. [Dipt.]

2324.—Thienemann, A. Hydrobiologische Untersuchungen an Quellen. v. Die Trichopterenfauna der Quellen Holsteins (Mit einem Anhang über die Metamorphose der Beraeinen). Zs. wiss. Insektenbiol. Berlin 18 1923 pp. 126–134, 179–186 9 figs.

Thienemann see Zavřel & Thienemann.

2325.—Thill, A. Bericht über Temperatur-Experimente im Sommer 1912. Bull. Soc. Nat. Luxembourg 23 1913 pp. 40–42. [Lep.]

2326.—Thompson, W. R. A criticism of the "sequence" theory of parasitic control. Ann. Ent. Soc. Amer. Columbus Ohio 16 1923 pp. 115–128 2 figs.

2327.—Thompson, W. R. Observations sur quelques "espèces biologiques" dans le groupe des Tachinaires. Bull. Soc. zool. France Paris 48 1923 pp. 165–170.

2328.—Thompson, W. R. Recherches sur la biologie des Diptères parasites. Bull. biol. France & Belg. Paris 57 1923 pp. 174–237.

2329.—Thomson, A. L. Mitteilungen aus der Biologischen Versuchsanstalt. Nr. 55. Notizen über die Regeneration der Vorderbeine in verschiedenen Gattungen von Mantiden. Anz. Ak. Wiss. Wien 58 1921 pp. 34–35. [Orth.]

2330.—Thomson, E. Y., Bell, J. & Pearson, K. A co-operative study of *Vespa vulgaris*. Biometrika Cambridge 7 1910 pp. 48–63; 8 1911 pp. 1–12.

2331.—Tietz, H. M. The anatomy of the digestive system of the Carolina locust (*D. carolina*, Linn.). Ann. Ent. Soc. Amer. Columbus Ohio 16 1923 pp. 256–257 5 pls. [Orth.]

2332.—Tillyard, R. J. A monograph of the Psocoptera, or Copeognatha, of New Zealand. Trans. N.Z. Inst. Wellington 54 1923 pp. 170–192 17 figs.

2333.—Tillyard, R. J. The stoneflies of New Zealand (Order Perlaria) with descriptions of new genera and new species. Trans. N.Z. Inst. Wellington 54 1923 pp. 197–217 18 figs.

2334.—Tillyard, R. J. Descriptions of new species and varieties of lacewings (Order Neuroptera Planipennia) from New Zealand, belonging to the families Berothidae and Hemerobiidae. Trans. N.Z. Inst. Wellington 54 1923 pp. 217–225 5 figs.

2335.—Tillyard, R. J. Descriptions of two new species of may-flies (Order Plectoptera) from New Zealand. Trans. N.Z. Inst. Wellington 54 1923 pp. 226–230 5 figs. 1 pl.

2336.—Tillyard, R. J. Mesozoic Insects of Queensland. No. 10. Summary of the Upper Triassic Insect Fauna of Ipswich, Q. (With an appendix describing new Hemiptera and Planipennia). Proc. Linn. Soc. N.S.W. Sydney 48 1923 pp. 481–498 1 pl. 4 figs.

2337.—Tillyard, R. J. Mesozoic insects of Queensland. Publ. Queensl. Geol. Surv. Brisbane 273 1923 pp. 1–75 7 pls. [Col.]

2338.—Tillyard, R. J. The Embioptera or web-spinners of Western Australia. J. R. Soc. W. Australia Perth 9 1923 pp. 61–68 figs.

2339.—Tillyard, R. J. On the mouth-parts of the Micropterygoidea (Lep.). Trans. Ent. Soc. London 1923 pp. 181–206 12 figs.

2340.—Tillyard, R. J. The wing-venation of the Order Plectoptera or Mayflies. J. Linn. Soc. (Zool.) London 35 1923 pp. 143–162 10 figs.

2341.—Tillyard, R. J. *Tarsophlebiopsis mayi* n.g. et n.sp., a dragon-fly found in the body chamber of a Corallian ammonite. Geol. Mag. London 60 1923 pp. 146–152 1 pl. 3 figs. [Odon.]

2342.—Tillyard, R. J. The lower Permian insects of Kansas. Preliminary announcement. Ent. News Philadelphia 34 1923 pp. 292–295.

2343.—Timberlake, P. H. Descriptions of two new species of Encyrtidae from Mexico reared from mealy-bugs (Hym. Chalcidoidea). Proc. Hawaiian Ent. Soc. Honolulu 5 1922 1923 pp. 323–333 1 fig. 1 pl.

2344.—Tindale, N. B. On Australian Rhopalocera. Trans. R. Soc. S. Aust. Adelaide 47 1923 pp. 342–354 6 figs. 3 pls.

2345.—Tindale, N. B. The flora and fauna of Nuyts Archipelago and the Investigator Group. No. 13. Orthoptera. Trans. R. Soc. S. Aust. Adelaide 47 1923 pp. 362–364 1 fig. 1 pl.

2346.—Tindale, N. B. Review of Australian Mantidae. Rec. S. Aust. Mus. Adelaide 2 1923 pp. 425–457 11 pls. 4 figs. [Orth.]

Tocco, R. di see Pigorini & Tocco.

2347.—Toedtmann, W. Die Spermatozoen von *Gryllotalpa vulgaris* Latr. Zool. Anz. Leipzig 57 1923 pp. 287–291 figs. [Orth.]

2348.—Toedtmann, W. Die Spermatozoen von *Formica rufa* L. Zool. Anz. Leipzig 58 1923 pp. 52–55.

2349.—Tonkova, V. Zur mikroskopischen Anatomie der Rectaldrüsen bei den Insekten. Rev. russe Ent. Petrograd 18 1923 pp. 69–80.

2350.—Tonnoir, A. Nouvelle contribution à l'étude des Psychodidae (Diptera) et description de dix espèces nouvelles d'Europe. Ann. Soc. ent. Belg. Brussels 62 1923 pp. 153–181 11 figs.

2351.—Tonnoir, A. Comment les larves de *Simulium* filent leurs cocons. Bull. Soc. ent. Belg. Brussels 5 1923 pp. 85–90 10 figs. [Dipt.]

2352.—Tonnoir, A. Aperçu sur la faune diptérienne de la Nouvelle Zélande. Bull. Soc. ent. Belg. Brussels 5 1923 pp. 91–100.

2353.—Tonnoir, A. L. Notes on Australasian Rhypidae. Ann. Mag. Nat. Hist. London (9) 12 1923 pp. 502–505 1 fig. [Dipt.]

2354.—Tonnoir, A. Australian Blepharoceridae Part II. Larvae and pupae. Austr. Zool. Sydney 3 1923 pp. 47–60. [Dipt.]

2355.—Tonnoir, A. L. Australian Blepharoceridae. Corrections and additions to Parts I and II. Austr. Zool. Sydney 3 1923 pp. 135–142. [Dipt.]

2356.—Torre Bueno, J. R. de la. Hemiptera of Connecticut: Ochteridae to Reduviidae. Conn. N. H. Surv. Hartford Bull. 34 1923 pp. 391–421, 658–665, 674–692 1 pl. 30 figs.

2357.—Torre-Bueno, J. R. de la. Taxonomic characters in *Microvelia*. Westw. Bull. Brooklyn Ent. Soc. 18 1923 pp. 138–143. [Hem.]

2358.—Torre-Bueno, J. R. de la. A Saldid genus new to the United States and a new species, with notes on other water bugs from the Adirondacks. Bull. Brooklyn Ent. Soc. 18 1923 pp. 149–154. [Hem.]

2359.—Torre-Bueno, J. R. de la. & Hussey, R. F. A new North American *Notonecta*. Bull. Brooklyn Ent. Soc. 18 1923 pp. 104–107 3 figs. [Hem.]

2360.—Trappmann, W. Die Malpighischen Gefäße von *Apis mellifera* L. Arb. Biol. Reichsanst. Land- u. Forstw. Berlin 11 1923 pp. 565–622 31 figs. [Hym.]

2361.—Trautmann, W. Untersuchungen an einigen Goldwespenformen. V. D. ent. Zs. Berlin 1923 pp. 243–244. [Hym.]

2362.—Trella, T. Verzeichnis der Käfer der Umgebung von Przemysl. Polskie Pismo Ent. Lemberg 2 1923 pp. 12–19. [Col.]

2363.—Trella, T. Drei für Polenfauna neue Käfer. Polskie Pismo Ent. Lemberg 2 1923 p. 19.

2364.—Trella, T. Verzeichnis der Käfer der Umgebung von Przemysl. Polskie Pismo Ent. Lemberg 2 1923 pp. 110–123 5 figs. [Col.]

2365.—Trouvelot, B. Sur la biologie de *Megacraspedus dolosellus* Zell. Bull. Soc. ent. France Paris 1923 pp. 158–160 1 fig. [Lep.]

2367.—Turati, E. Cinque anni di ricerche nell'Appennino Modenese. Atti Soc. ital. Sci. nat. Milan 62 1923 pp. 4–74 2 pls. [Lep.]

2368.—Turati, E. Nomenclatura. Boll. Soc. ent. ital. Genoa 55 1923 pp. 29–32. [Lep.]

2369.—Turati, E. Spizzichi di Lepidotteroologia. Boll. Soc. ent. ital. Genoa 55 1923 pp. 116–122.

2370.—Turati, E. Missione zoologica del Dott. E. Festa in Cirenaica. V. Lepidotteri. Boll. Mus. Zool. Anat. comp. Torino 36 1921 no. 742 4 pp.

2371.—Turner, A. J. The Australian Gelechianae (Lepidoptera). Proc. R. Soc. Queensland Brisbane 31 1920 pp. 108–172.

2372.—Turner, A. J. Studies in Australian Lepidoptera. Proc. R. Soc. Victoria Melbourne 35 (N.S.) 1922 pp. 26–62.

2373.—Turner, A. J. New Australian Microlepidoptera. Trans. R. Soc. S. Aust. Adelaide 47 1923 pp. 165–194.

2374.—Turner, A. J. New Australian Microlepidoptera. Proc. R. Soc. Vict. Melbourne 36 1923 pp. 58–81.

2375.—Turner, A. J. A Revision of the Australian Anerastrianae (Lepidoptera). Proc. Linn. Soc. N.S.W. Sydney 48 1923 pp. 451–461.

2376.—Turner, A. J. A Lepidopterous scavenger living in Parrots' nests. Trans. Ent. Soc. London 1923 pp. 170–175. [Lep.]

2377.—Turner, C. H. Tropisms in insect behaviour. Trans. Acad. Sci. St. Louis 24 no. 9 1923 pp. 19–26.

2378.—Turner, C. H. The homing of the Hymenoptera. Trans. Acad. Sci. St. Louis 24 no. 9 1923 pp. 26–45 1 pl.

2379.—Turner, C. H. The psychology of "playing 'possum." Trans. Acad. Sci. St. Louis 24 no. 9 1923 pp. 46–54.

2380.—Turner, C. L. The Psychodidae (moth-like flies) as subjects for studies in breeding and heredity. Amer. Nat. New York 57 1923 pp. 545–558. [Dipt.]

2381.—Uffeln, —. Merkwürdige Schwalbenschwänze (*Papilio machaon*). Intern. ent. Zs. Guben 17 1923 pp. 25–28. [Lep.]

2382.—Uhlmann, E. Genotypisches und phänotypisches bei Insektenbauten. Verh. D. zool. Ges. Berlin 28 1923 pp. 44–46.

2383.—Ule, C. H. Beiträge zur Grossschmetterlingsfauna Pommerns. Ent. Rdsch. Stuttgart 40 1923 pp. 23–24, 27, 29–30. [Lep.]

2384.—Ulmer, G. Neue Ephemeropteren. Arch. Naturg. Berlin **85** Abt. A Heft 11 (1919) 1920 pp. 1–80 figs. [Neur.]

2385.—Ulrich, W. Ergebnisse einer von Fr. Schumacher und A. Spaney unternommenen zoologischen Reise nach den nordwestlichen Balkangebieten. Coleoptera. I. Chrysomelidae. Ent. Blätter Berlin **19** 1923 pp. 101–113 & 145–156.

2386.—Urban, C. Zur Lebensweise des *Cionus alauda* Hbst. Ent. Blätter Berlin **19** 1923 pp. 86–87. [Col.]

2387.—Urban, C. Zur Lebensweise von *Bagous binodulus* Hbst. und *B. glabrirostris* Hbst. Ent. Blätter Berlin **19** 1923 pp. 125–126. [Col.]

2388.—Urban, C. *Phytonomus pedestris* Payk. und seine Entwicklung. Ent. Blätter Berlin **19** 1923 pp. 127–128. [Col.]

2389.—Urban, C. Die Nahrungs-pflanzen der Apionen. Ent. Blätter Berlin **19** 1923 pp. 171–176. [Col.]

2390.—Uvarov, B. P. Records and descriptions of Orthoptera from North-West Africa. Nov. Zool. Tring **30** 1923 pp. 59–78 1 pl. 2 figs.

2391.—Uvarov, B. P. Some new Orthoptera from Palestine. Ent. Mo. Mag. London **59** 1923 pp. 32–35 1 fig.

2392.—Uvarov, B. P. Some new or little-known grasshoppers from Palestine. Ent. Mo. Mag. London **59** 1923 pp. 81–86 2 figs.

2393.—Uvarov, B. P. A Revision of the Old World Cyrtacanthacrini (Orthoptera, Acridiidae). Ann. Mag. Nat. Hist. London (9) **11** 1923 I pp. 130–144 7 figs., II pp. 473–490; **12** 1923 III pp. 345–367 1 fig.

2394.—Uvarov, B. P. Some new short-horned grasshoppers from East Africa. Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 675–689. [Orth.]

2395.—Uvarov, B. P. Some new long-horned grasshoppers from Ceylon (Orthoptera, Tettigoniidae). Ann. Mag. Nat. Hist. London (9) **12** 1923 pp. 528–532 2 figs.

2396.—Uvarov, B. P. Notes on locusts of economic importance with

some new data on the periodicity of locust invasion. Bull. Ent. Res. London **14** 1923 pp. 31–39 fig. [Orth.]

2397.—Uvarov, B. P. Some new or interesting Orthoptera from Persia, Baluchistan and Western India. J. Bombay Nat. Hist. Soc. **29** 1923 pp. 643–652 1 pl.

Uvarov, B. P. see Burr, Campbell & Uvarov.

2398.—Van Duzee, E. P. Hemiptera of Connecticut: Fulgoridae. Conn. N. H. Surv. Hartford Bull. **34** 1923 pp. 24–55 1 pl. 3 figs.

2399.—Van Duzee, E. P. A re-arrangement of our North American Thyreocorinae (Hemip.). Ent. News Philadelphia **34** 1923 pp. 302–305.

2400.—Van Duzee, E. P. Notes on *Lygaeus kalmii* Stål and allies (Hemip.). Canad. Ent. Orillia **55** 1923 p. 214.

2401.—Van Duzee, E. P. A new subspecies of *Euryophthalmus cinctus* (Hemiptera). Canad. Ent. Orillia **55** 1923 p. 270.

2402.—Van Duzee, E. P. Expedition of the California Academy of Sciences to the Gulf of California in 1921. The Hemiptera (True bugs, etc.). Proc. Cal. Acad. Sci. San Francisco **12** 1923 pp. 123–200.

2403.—Van Duzee, M. C. Expedition of the California Academy of Sciences to the Gulf of California in 1921. New Dolichopodidae (Long-legged Flies). Proc. Cal. Acad. Sci. San Francisco **12** 1923 pp. 105–112. [Dipt.]

2404.—Van Duzee, M. C. The *Pelastoneurus* of North America (Dolichopodidae, Diptera). Ann. Ent. Soc. Amer. Columbus Ohio **16** 1923 pp. 30–47 1 pl.

2405.—Van Duzee, M. C. New and known species of *Porphyrops* from North America (Diptera, Dolichopodidae). Ent. News Philadelphia **34** 1923 pp. 239–243.

2406.—Van Duzee, M. C. Diptera of the family Dolichopodidae [from Alaska]. Ohio J. Sci. Columbus **23** 1923 pp. 241–264 1 pl.

2407.—Van Duzee, M. C. Notes and descriptions of two-winged flies of the family Dolichopodidae from Alaska. Proc. U. S. Nat. Mus. Washington D.C. 63 1923 art. 21 no. 2490 16 pp. 1 pl. [Dipt.]

2408.—Van Duzee, M. C. New species of North American Dolichopodidae. Psyche Boston 30 1923 pp. 63–73 5 figs. [Dipt.]

2409.—Van Dyke, E. C. New species of Coleoptera from California. Bull. Brooklyn Ent. Soc. 18 1923 pp. 37–53.

2410.—van Eecke, R. A very remarkable Longicorn from Sumatra. Zool. Med. Leiden 6 1921 pp. 97–98. [Col.]

2411.—van Eecke, R. *Antharea brunnea* nov. spec. Zool. Med. Leiden 6 1921 pp. 99–100 fig. [Lep.]

2412.—van Eecke, R. Eenige correcties in en aanvullingen tot de "Eerste Bijdrage tot de Kennis der Nederlandsche Thysanoptera." Ent. Ber. Ned. Ent. Vereen. The Hague 6 1923 pp. 135–136.

2413.—van Eecke, R. Fouten in Seitz en eenige Synoniemen. Ent. Ber. Ned. Ent. Vereen. The Hague 6 1923 pp. 175–176. [Lep.]

2414.—van Eecke, R. Erste Bijdrage tot de Kennis der Nederlandsche Thysanoptera. Natuurk. Verh. Holland. Maatschappij Wetenschapen Haarlem 9. [Not seen.] *1922 14244.8 pl. 30/17.*

2415.—Vansell, G. H. The urinary system of *Phlegethonius sexta* Johan. (Lepidoptera). Kansas Univ. Sci. Bull. Lawrence 14 1922 pp. 365–369 1 pl.

2416.—Varas Arangua, E. Contribución al estudio de los Cicindelidae. Los Cicindelidae de Chile. Rev. chil. Hist. nat. Santiago 25 (1921) 1923 pp. 28–61 1 pl. [Col.]

2417.—Vayssiére, P. Un nouveau Coccide (Hem.) de la faune africaine. Bull. Soc. ent. France Paris 1923 pp. 152–155 2 figs.

2418.—Vecchi, A. Influenza dell'alimentazione con *Maclura aurantiaca* sul Baco da seta. Boll. Lab. Zool. gen. agrar. R. Scuola sup. Agric. Portici 16 1923 pp. 302–313. [Lep.]

Veloso, F. see Fontes & Veloso.

2419.—Verhoeff, K. W. Zur Kenntnis der Morphologie und Biologie der *Cionus*-Larven, als Vertreter eines eigenartigen Larventypus der Coleopteren. Arch. Natg. Berlin Abt. A 83 Heft 1 (1917) 1919 pp. 52–69 1 pl.

2420.—Verhoeff, K. W. Zur Entwicklung, Morphologie und Biologie der Vorlarven und Larven der Canthariden. Arch. Natg. Berlin Abt. A 83 Heft 2 (1917) 1919 pp. 102–140 1 pl. [Col.]

2421.—Verhoeff, K. W. Über Organisation und Entwicklung der Chrysomeliden *Melasoma populi* und *Phyllodecta vitellinae*. Arch. Natg. Berlin Abt. A 83 Heft 4 (1917) 1919 pp. 142–173 1 pl. [Col.]

2422.—Verhoeff, K. W. Über Bau und Faltung der Flügel von *Forficula auricularia*. 8. Dermapteren-Aufsatz. Arch. Natg. Berlin Abt. A 83 Heft 7 (1917) 1919 pp. 1–23 1 pl.

2423.—Verhoeff, K. W. Studien über die Organisation und Biologie der Staphylinoidea. IV. Zur Kenntnis der Staphyliniden-Larven. V. Zur Kenntnis der Oxyteliden-Larven. Arch. Natg. Berlin 85 Abt. A Heft 6 (1919) 1920 pp. 1–111 2 pls. [Col.]

2424.—Verhoeff, K. W. Beiträge zur Kenntnis der Coleopteren-Larven mit besonderer Berücksichtigung der Clavicornia. Arch. Natg. Berlin Abt. A 89 Heft 1 1923 pp. 1–109 7 pls.

2425.—Verhoeff, K. W. Zur Kenntnis der Canthariden-Larven. 2. Beitrag. Arch. Natg. Berlin Abt. A 89 1923 Heft 1 pp. 110–137 1 pl. [Col.]

2426.—Verhoeff, K. W. Ueber Larventypen der Coleopteren und die Auflösung der alten Malacodermata. Zs. wiss. Insektenbiol. Berlin 18 1923 pp. 115–125.

2427.—Verhoeff, W. Zur Kenntnis der Japygiden. D. ent. Zs. Berlin 1923 pp. 33–52 2 pls. [Thysanura.]

2428.—Verity, R. On the geographical and seasonal variations of *Pararge megaera*, L. Ent. Rec. London 35 1923 pp. 23–29. [Lep.]

2429.—Verity, R. On some Italian races of *Erebia aethiops*, Esp., and of *E. pirene*, Hüb. (= *stygne*, O.) and on *E. flavofasciata*, Rühl-Heyne. Ent. Rec. London **35** 1923 pp. 134–136. [Lep.]

2430.—Verity, R. Geographical variation in *Hipparchia semele*, L. Ent. Rec. London **35** 1923 pp. 153–156.

2431.—Verity, R. The nomenclature of the European *Euclidiae ausonia* Hb. (= *belia* auct. nec L.). Ent. Rec. London **35** 1923 pp. 169–171.

2432.—Verity, R. & Querci, O. Races and seasonal polymorphism of the Grypocera and of the Rhopalocera of Peninsular Italy. Ent. Rec. London **35** 1923 sep. pp. 1–20. [Continuing.]

2433.—Verlaine, L. Recherches sur la biologie des *Synagris* (Hymén.). Le *Synagris didieri* Buyss. Rev. zool. afr. Brussels **11** 1923 pp. 435–475 3 pls.

2434.—Viehmeyer, H. Anleitung zum Sammeln von Ameisen. Arch. Naturg. **84** Abt. A Heft 9 (1918) 1920 pp. 160–170. [Hym.]

2435.—Viereck, H. L. Insects, Arachnids and Chilopods of the Pribilof Islands, Alaska; Hymenoptera. North Amer. Fauna Washington D.C. no. **46** 1923 pp. 229–236.

2436.—Viereck, H. L. The flower relations of wild bees. Canad. Field Nat. Ottawa **37** 1923 pp. 164–165. [Hym.]

2437.—Vignon, P. Sur le mimétisme de sauterelles Ptérochroées. C.R. Acad. Sci. Paris **176** 1923 pp. 1348–1350 2 figs. [Orth.]

2438.—Vignon, P. Que faut-il penser du mimétisme? Rev. sci. Paris **61** 1923 pp. 515–520 14 figs.

2439.—Villeneuve, J. Descriptions de Diptères nouveaux. Bull. Mus. Hist. nat. Paris 1923 pp. 91–96.

2440.—Villeneuve, J. Description d'une nouvelle espèce du genre *Drosophila* Fallén (Diptera). Bull. Soc. ent. France Paris 1923 p. 28.

2441.—Villeneuve, J. Descriptions de Phasinae nouveaux (Diptera). Rev. zool. afr. Brussels **11** 1923 pp. 78–81.

2442.—Villeneuve, J. Myodaires supérieurs d'Egypte inédits (Dipt.). Bull. Soc. R. ent. Egypte Cairo **1922** 1923 pp. 88–94.

2443.—Vimmer, A. Příspěvek k poznání puparií čel. Tachinidae (Obr. 10). Bul. Sect. ent. Mus. Nat. Prague **1** 1923 pp. 55–59 1 fig. [Dipt.]

Vogel, G. see Netolitzky & Vogel.

2444.—Vogel, R. Zur Kenntnis des feineren Baues der Geruchsorgane der Wespen und Bienen. Zs. wiss. Zool. Leipzig **120** 1923 pp. 281–324 figs. [Hym.]

2445.—Voïnov, D. Sur une nouvelle inclusion cytoplasmique prenant part à la formation du perforateur dans les éléments males du *Gryllotalpa vulgaris*. C.R. Soc. Biol. Paris **88** 1923 pp. 1348–1350. [Orth.]

Volbeda, G. see Jurriaanse & Volbeda.

2446.—Vorbrodt, C. Schmetterlinge der Schneestufe schweizerischen Hochgebirge [cont.]. Intern. ent. Zs. Guben **16** 1923 pp. 177–178, 194–195. [Lep.]

2447.—Voss, E. Einige weitere *Camarotus*-Arten, zugleich eine Ergänzung der Hellerschen Studie über diese Gattung. (Col. Curc.). D. ent. Zs. Berlin **1923** pp. 68–71.

2448.—Voss, E. Deutung einer Schrankischen *Involvulus*-Art. (Col. Curc.). D. ent. Zs. Berlin **1923** p. 238.

2449.—Voss, E. *Deporaus tristis* F. ein Blattwickler. (14. Beitrag zur Kenntnis der Curculioniden). D. ent. Zs. Berlin **1923** pp. 335–337. [Col.]

2450.—Voss, E. Indo-Malayische Rhynchitinen (Curculionidae). II. Zehnter Beitrag zur Kenntnis der Curculioniden. Philipp. J. Sci. Manila **22** 1923 pp. 489–514. [Col.]

2451.—Voukassowitch, P. Sur la biologie de deux Hyménoptères parasites de la Pyrale de la vigne. C.R. Acad. Sci. Paris **177** 1923 pp. 906–908.

2452.—Vretlind, E. *Lycaena pheretes* Hb. Ent. Tidskr. Stockholm **44** 1923 p. 168. [Lep.]

2453.—Vuillet, A. Les parasites de *Liparis dispar* et *Liparis chrysorrhoea* en Amérique (Troisième note). Trav. Sci. Univ. Rennes **11** 1912 pp. 72–73. [Lep.]

2454.—[Vutchetitch, V. N.] Вучетич, B. H. Le cocon des Hyménoptères fossyeurs considéré comme base de classification. Bull. Soc. ent. Moscou 2 no. 2 1923 pp. xviii–xix. [In Russian.]

2455.—Wachs, H. Beobachtungen am Hornissen-Neste und über dessen Bauweise. Verh. D. zool. Ges. Berlin 28 1923 pp. 46–47. [Hym.]

2456.—Wade, J. S. & St. George, R. A. Biology of the false wireworm *Eleodes suturalis* Say. J. Agric. Res. Washington D.C. 26 1923 pp. 547–566 4 figs: 2 pls. [Col.]

2457.—Wadley, F. M. Factors affecting the proportion of alate and apterous forms of Aphids. Ann. Ent. Soc. Amer. Columbus Ohio 16 1923 pp. 279–303 3 figs. [Hom.]

2458.—Wadsworth, R. V. Abnormal markings of *Agrion puella* Linn. Entomologist London 56 1923 pp. 57–58 1 fig. [Odon.]

2459.—Wagner, F. [Eine neue paläarktische Geometridae]. Verh. zool.-bot. Ges. Wien 64 1914 pp. (171)–(174). [Lep.]

2460.—Wagner, F. Beschreibung einer neuen mediterranen Form. Verh. zool.-bot. Ges. Wien 70 1920 pp. (42)–(43) 2 figs. [Lep.]

2461.—Wagner, H. Una nuova specie italiana d'*Ectapion*. Boll. Soc. ent. ital. Genoa 55 1923 pp. 97–98. [Col.]

2462.—Wahl, B. [Die postembryonale Entwicklung des Fliegenkopfes.] Verh. zool.-bot. Ges. Wien 64 1914 pp. (202)–(205). [Dipt.]

2463.—Wahlgren, E. Über die alpine und subalpine Collembolenfauna Schwedens. Naturwiss. Untersuch. Sarekgebirg. Schwed. Lappland Stockholm 4 1919 pp. 743–762.

2464.—Wahlgren, E. Våra Apamea-arter. Ent. Tidskr. Stockholm 44 1923 pp. 187–192 3 figs. [Lep.]

2465.—Wahlgren, E. *Cucullia lucifuga* Hb. och *lactucae* Esp. Ent. Tidskr. Stockholm 44 1923 pp. 193–199. [Lep.]

2466.—Walker, E. M. Notes on the Odonata of Godbout, Quebec. Canad. Ent. Orillia 55 1923 pp. 5–12.

2467.—Walker, J. J. Occurrence of *Cucullia lactucae* W. V. at Oxford. Ent. Mo. Mag. London 59 1923 p. 8. [Lep.]

2468.—Walsh, G. B. Observations on the growth of the larva of the puss moth, *Dicranura vinula* F. Trans. Ent. Soc. London 1923 pp. 251–257 3 figs. [Lep.]

2469.—Walther, —. Ueber wissenschaftliches Sammeln. D. ent. Zs. Iris Dresden 37 1923 pp. 9–10.

Walton, C. L. see Theobald & Walton.

2470.—Walton, W. R. Some phases of insect parasitism. Canad. Field Nat. Ottawa 37 1923 pp. 128–132.

2471.—Walton, W. R. Insects, Arachnids and Chilopods of the Pribilof Islands, Alaska; Diptera. North Amer. Fauna Washington D.C. no. 46 1923 p. 228.

2472.—Wandolleck, B. Ueber die Eier der *Lipeurus*-Arten. Zs. Schädlingsbekämpfung Berlin 1 1923 pp. 20–23 3 figs. [Mallophaga.]

2473.—Ward, L. The genetics of curly wing in *Drosophila*. Another case of balanced lethal factors. Genetics Menasha Wis. 8 1923 pp. 276–300 3 figs. [Dipt.]

2474.—Warnecke, G. Eine neue Art von *Lemonia dumia* L. und einige Bemerkungen zur Farbenbenennung in der Entomologie. Intern. ent. Zs. Guben 17 1923 pp. 9–13. [Lep.]

2475.—Warren, B. C. S. Six weeks among the butterflies of Eastern Switzerland. Ent. Rec. London 35 1923 pp. 78–79, 98–101 1 pl. [Lep.]

2476.—Warren, E. Some statistical observations on Termites, mainly based on the work of the late Mr. G. D. Haviland. Biometrika Cambridge 6 1909 pp. 329–347.

2477.—Washburn, F. L. Notes on collecting insects in the Marquesas Islands. Ann. Ent. Soc. Amer. Columbus Ohio 16 1923 pp. 274–277.

2478.—Wasmann, E. Luxemburger Ameisenkolonien mit Mendel'scher Mischnung. (209 Beitrag zur Kenntnis der Myrmekophilen.) Gesellsch. Luxemb. Naturfreunde Festschrift zur Feier des 25-jährigen Bestehens 1890–1915 1915 pp. 89–101. [Hym.]

2479.—Wasmann, E. Alte Berichte über die *Atta*-Nester Südamerikas, mit einem statischen Vergleich der Anpassungen an *Atta* und an *Eciton*. Biol. Zentralbl. Leipzig **43** 1923 pp. 106–115. [Hym.]

2480.—Wasmann, E. Eine interessante Instinktregulation bei Ameisen (*Lasius mixtus* Nyl.). Atti Pont. Accad. Nuovi Lincei Rome **76** 1923 pp. 255–259. [Hym.]

**Wasmann**, E. *see* Champion & Wasmann.

2481.—Waterhouse, G. A. A further account of breeding experiments with the Satyrine genus *Tisiphone*. Proc. Linn. Soc. N.S.W. Sydney **48** 1923 pp. xiii–xvi 2 pls. [Lep.]

2482.—Waterhouse, G. A. Notes on the life-histories of Australian butterflies. Proc. Linn. Soc. N.S.W. Sydney **48** 1923 pp. xvii–xxii. [Lep.]

2483.—Waterston, J. On the Mallophaga of the Shackleton-Rowett Expedition, 1921–1922. Trans. Ent. Soc. London 1923 pp. 288–290.

2484.—Waterston, J. Results of the Oxford University expedition to Spitsbergen, 1921. No. 25. Hymenoptera Parasitica: Ichneumonoidea. Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 31–33.

2485.—Waterston, J. On an internal parasite (Hym. Chalcidoidea) of a Thrips from Trinidad. Bull. Ent. Res. London **13** 1923 pp. 453–455 2 figs.

2486.—Waterston, J. Two new Anoplura. Bull. Ent. Res. London **14** 1923 pp. 99–102 2 figs.

2487.—Waterston, J. Notes on parasitic Hymenoptera. Bull. Ent. Res. London **14** 1923 pp. 103–118 8 figs.

2488.—Waters, E. G. R. Tineina in the Oxford District, 1912–23. Ent. Mo. Mag. London **59** 1923 pp. 195–199, 225–228. [Lep.]

2489.—Watkins, H. T. G. A new *Argynnис* race. Entomologist London **56** 1923 p. 108. [Lep.]

2490.—Watkins, H. T. G. Notes on the butterflies of the Banks Collection. Entomologist London **56** 1923 pp. 204–209. [Lep.]

**Watson**, E. B. *see* Buckhurst, Staniland, & Watson.

2491.—Watson, J. H. On some Palearctic Saturnids (Lep., Het.) from Szechuan, Western China. Entomologist London **56** 1923 pp. 171–173.

2492.—Watson, J. R. Another camphor Thrips. Florida Ent. Gainesville **6** 1922 pp. 6–7. [Thys.]

2493.—Watson, J. R. Additions to the Thysanoptera of Florida, X, XI. Florida Ent. Gainesville **6** 1922 pp. 21–23; 1923 p. 58.

2494.—Watson, J. R. The proper name and distribution of the Florida flower Thrips. Florida Ent. Gainesville **7** 1923 pp. 9–11. [Thys.]

2495.—Watson, J. R. Synopsis and catalog of the Thysanoptera of North America with a translation of Karny's keys to the genera of Thysanoptera and a bibliography of recent publications. Florida Agric. Expt. Sta. Tech. Bull. **168** 1923 100 pp.

2496.—Watt, M. N. The leaf-mining insects of New Zealand. Part iii. Species belonging to the genera *Agromyza* (Fallen) and *Phytomyza* (Fallen) (Diptera). Trans. N. Z. Inst. Wellington **54** 1923 pp. 465–489 4 pls. 34 figs.

2497.—Weber, H. Zur Gliederung des Insektenthorax. Zool. Anz. Leipzig **57** 1923 pp. 97–116 figs.

2498.—Webster, R. L. Some notes on *Empoasca flavescens* Fabr. (Homoptera, Cicadellidae). Proc. Iowa Acad. Sci. Des Moines **29** 1923 pp. 157–161 2 figs.

2499.—Wegener, M. Die biologische Bedeutung der Nackengabel der Papilionidenraupen. Biol. Zentralbl. Leipzig **43** 1923 pp. 292–301 fig. [Lep.]

2500.—Wegener, M. Über Bildungsherde der Hämocyten bei Lepidopterenlarven (*Zerynthia polyxena*). Zool. Anz. Leipzig **57** 1923 pp. 28–38 figs.

2501.—Wehrli, E. Eine neue *Gnophos*-Art aus der *serotinaria*-Gruppe, *Gn. serotinoides* n. sp. und ihre Formen, aus den Alpen und der Waldai. Schweizer ent. Anz. Zürich **1** 1922 pp. 26–28 11 figs. [Lep.]

2502.—Wehrli, E. Ueber den grossen Wert der vergleichend anatomischen Untersuchung des starren Chitinskelettes der weibliche Genitalorgane (Haftwülste, Haftplatten, Bursa und Vagina) für die Unterscheidung schwieriger Arten. Schweizer ent. Anz. Zürich 2 1923 pp. 9–10, 13–15 3 figs. [Lep.]

2503.—Wehrli, E. Neue Psychiden. Soc. ent. Stuttgart 38 1923 pp. 25–26 5 figs. [Lep.]

2504.—Weise, J. Afrikanische Chrysomeliden und Coccinelliden. Arch. Natg. Berlin Abt. A 83 Heft 4 (1917) 1919 pp. 174–207. [Col.]

2505.—Weise, J. H. Sauter's Formosa-Ausbeute : Coccinellidae. Arch. Natg. Berlin Abt. A. 89 1923 Heft 2 pp. 182–188. [Col.]

2506.—Weise, J. Uebersicht der Galerucinen. Wiener ent. Ztg. 40 1923 p. 124. [Col.]

2507.—Weise, J. Chrysomeliden und Coccinelliden aus Queensland. Results of Dr. E. Mjöberg's Swedish Scientific Expedition to Australia 1910–1913. 31. Ark. Zool. Stockholm 15 no. 12 1923 150 pp. [Col.]

2508.—Weiss, A. Contribució a la fauna lepidopterològica de Catalunya. Treb. Inst. catalana Hist. nat. Barcelona 1 1915 pp. 59–89.

2509.—Weiss, H. B. & Kirk, W. H. Pontedera's 1718 paper on the Cicada (Homop.). Ent. News Philadelphia 34 1923 pp. 11–16 & 41–44.

2510.—Weiss, H. B. & Lott, R. B. Notes on *Rhodobaenus 13-punctatus* (Ill.), the cockle-bur bill-bug (Col.). Ent. News Philadelphia 34 1923 pp. 103–106.

Weiss, H. B. see Nicolay & Weiss.

2511.—Weiss, P. Mitteilungen aus der Biologischen Versuchsanstalt. No. 71. Richtung-bestimmende Einflüsse äusserer Faktoren : Die Ruhestellung en der Vanessiden. Anz. Ak. Wiss. Wien 59 1922 pp. 19–20. [Lep.]

2512.—Weiss, P. Mitteilungen aus der Biologischen Versuchsanstalt No. 83. Winkelmessungen am Schmetterlingsflügel. Anz. Ak. Wiss. Wien 59 1922 p. 205. [Lep.]

2513.—Wendeler, H. Ein neuer *Staphylinus* der Philippinen. D. ent. Zs. Berlin 1923 p. 385. [Col.]

2514.—Werner, F. Zweiter Beitrag zur Kenntnis der Mantodeen von Niederländisch-Indien. Treubia Buitenzorg 3 1923 pp. 387–404 3 figs. [Orth.]

2515.—Werner, F. Zur Kenntnis afrikanischer und indischer Mantodeen. Verh. zool.-bot. Ges. Wien 66 1916 pp. 254–296 11 figs.

2516.—Werner, F. Eine neue Gespenstheuschrecke aus Sumatra. Verh. zool.-bot. Ges. Wien 68 1918 pp. (267)–(268) 1 fig. [Orth.]

2517.—Wettstein - Westersheim, O. Ueber eine Lepidoptera-Ausbeute aus Schwedisch-Lappland. Verh. zool.-bot. Ges. Wien 72 (1922) 1923 pp. (24)–(28).

2518.—Wheeler, W. M. The Ants of the Baltic Amber. Schr. physik. Ges. Königsberg 55 (1914) 1915 pp. 1–142 66 figs. [Hym.]

2519.—Wheeler, W. M. A study of some social beetles in British Guiana and of their relations to the ant-plant, *Tachigalia*. Zoologica New York 3 1921 pp. 35–134 5 pls. 9 figs. [Col.]

2520.—Wheeler, W. M. The Tachigalia ants. Zoologica New York 3 1921 pp. 137–168 4 figs. [Hym.]

2521.—Wheeler, W. M. Notes on the habits of European and North American Cucujidae (sens. auct.). Zoologica New York 3 1921 pp. 173–183. [Col.]

2522.—Wheeler, W. M. Ants of the genera *Myopias* and *Acanthoponera*. Psyche Boston Mass. 30 1923 pp. 175–192 5 figs. [Hym.]

2523.—Wheeler, W. M. Chinese ants collected by Professor S. F. Light & Professor A. P. Jacot. Amer. Mus. Novit. New York 69 1923 pp. 1–6. [Hym.]

2524.—Wheeler, W. M. The occurrence of winged females in the ant genus *Leptogenys* Roger, with descriptions of new species. Amer. Mus. Novit. New York 90 1923 pp. 1–16 5 figs. [Hym.]

2525.—Wheeler, W. M. Social Life among the Insects. London, 1923 vii + 375 116 text-figs.

2526.—Wheeler, W. M. Wissenschaftliche Ergebnisse der schwedischen entomologischen Reise des Herrn Dr. A. Roman in Amazonas. 1914–1915. 7. Formicidae. Ark. Zool. Stockholm 15 no. 7 1923 6 pp. [Hym.]

White, R. Senior- *see* Senior-White.

Whitehead, W. E. *see* Brittain & Whitehead.

2527.—Wickham H. F. Insects, Arachnids and Chilopods of the Pribilof Islands, Alaska; Coleoptera. North Amer. Fauna Washington D.C. no. 46 1923 pp. 150–157.

2528.—Wiley, G. O. Life-history notes on two species of Saldidae (Hemiptera) found in Kansas. Kansas Univ. Sci. Bull. Lawrence 14 1922 pp. 301–311 2 pls.

2529.—Wiley, G. O. Some notes on the biology of *Curicta* from Texas. Kansas Univ. Sci. Bull. Lawrence 14 1922 pp. 507–508 1 pl. [Hem.]

2530.—Wiley, G. O. A new species of *Rheumatobates* from Texas (Heteroptera, Gerridae). Canad. Ent. Orillia 55 1923 pp. 202–205 1 pl.

2531.—Wilke, S. Beiträge zur Kenntnis der Gattung *Cybister* Curtis. Arch. Natg. Berlin 85 Abt. A Heft 2 pp. 243–276. [Col.]

2532.—Wille, J. Beiträge zur Biologie des Reiskäfers *Calandra oryzae* L. Zs. angew. Ent. Berlin 9 1923 pp. 333–342 1 fig. [Col.]

2533.—Willemse, C. Bijdrage tot de Kennis der Orthoptera s. s. van den nederlandsch indischen Archipel en omliggende gebieden. Zool. Med. Leiden 6 1921 pp. 1–44 1 pl. 4 figs.

2534.—Willemse, C. Locustidae (Acridiidae a. a.) et Phasgonuridae (Locustidae a. a.) de la Nouvelle Calédonie et des Iles Loyalty. Nova Calédonia A Zool. 3 1 pp. 97–112 (figs.) 1923.

2535.—Williams, C. B. Records and problems of Insect migration. Trans. Ent. Soc. London 1923 pp. 207–233 3 figs. [Lep.]

Williams, C. B. *see* Eltringham, Willmer & Williams.

2536.—Williams, F. X. Some biological notes on Philippine Zoology. Kansas Univ. Sci. Bull. Lawrence 14 1922 pp. 329–336.

2537.—Williams, H. B. Preliminary observations on the British Vanessids. Ent. Rec. London 35 1923 pp. 89–95, 113–115. [Lep.] [Continuing.]

Williams, Jr., R. C. *see* Skinner & Williams.

2538.—Williamson, E. B. Results of the University of Michigan-Williamson Expedition to Colombia, 1916–1917. I–III. Occ. Paprs. Mus. Zool. Univ. Michigan Ann Arbor no. 52 1918 14 pp. 2 pls.; no. 59 1918 18 pp. 2 pls.; no. 63 1919 6 pp. 1 pl. [Odonata.]

2539.—Williamson, E. B. Notes on American species of *Triacanthagyna* and *Gynacantha*. Univ. Michigan Mus. Zool. Misc. Pubn. 9 1923 80 pp. 7 pls. [Odon.]

2540.—Williamson, E. B. Notes on the genus *Erythemis* with a description of a new species (Odonata). Univ. Michigan Mus. Zool. Misc. Pubn. 11 1923 pp. 1–18 6 figs.

2541.—Williamson, E. B. Notes on the habitats of some tropical species of *Hetaerina* (Odonata). Occas. Paprs. Mus. Zool. Univ. Mich. Ann Arbor no. 130 1923 46 pp.

2542.—Williamson, E. B. A new species of *Archaeogomphus* (Odonata). Occas. Paprs. Mus. Zool. Univ. Mich. Ann Arbor no. 134 1923 10 pp. 1 pl.

2543.—Williamson, E. B. Some peculiarities of the dragonfly fauna of Trinidad (Odonata). Ent. News Philadelphia 34 1923 pp. 263–265.

2544.—Williamson, E. B. A new species of *Williamsonia* (Odonata, Corduliinae). Canad. Ent. Orillia 55 1923 pp. 96–98 3 figs.

Willmer, E. N. *see* Eltringham, Willmer & Williams.

2545.—Wilson, F. E. New Australian Coleoptera, with notes on some previously described species. Part 2. Proc. R. Soc. Victoria Melbourne 35 (N.S.) 1923 pp. 117–133.

2546.—Wilson, H. F. Hemiptera of Connecticut: Aphididae. Tribe Lachnini. Conn. N. H. Surv. Hartford Bull. **34** 1923 pp. 256–270 5 figs.

2547.—Winkler, A. Die spezifische Umgrenzung einiger *Anophthalmus* Strm. s. str. aus den Ostalpen. Koleopt. Rundsch. Vienna **10** 1923 pp. 160–162. [Col.]

2548.—Winn-Sampson, F. Notes on the nomenclature of the family Scolytidae. Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 269–271. [Col.]

2549.—Winn-Sampson, F. Previously undescribed Scolytidae and Platypodidae from the Indian area. Ann. Mag. Nat. Hist. London (9) **11** 1923 pp. 285–289.

2550.—Withycombe, C. L. The wing venation of *Raphidia maculicollis* Stephens. Entomologist London **56** 1923 pp. 33–35 2 figs. [Neur.]

2551.—Withycombe, C. L. A new British Hemerobiid (Order Neuroptera). Entomologist London **56** 1923 pp. 202–204 1 pl.

2552.—Withycombe, C. L. A Cecido-myiid new to Britain. Proc. Ent. Soc. London **1922** 1923 pp. lxxxii–lxxxii. [Dipt.]

2553.—Withycombe, C. L. Systematic notes on the Crocini (Nemopteridae) with descriptions of new genera and species. Trans. Ent. Soc. London 1923 pp. 269–287 2 pls. [Neur.]

2554.—Wohnig, A. *Das. selenitica* und *Macr. rubi* ihre Überwinterung und ihr Treiben. Intern. ent. Zs. Guben **17** 1923 pp. 13–14. [Lep.]

2555.—Wolcott, A. B. Two new species of West Indian Cleridae. Amer. Mus. Novit. New York **59** 1923 pp. 1–4 2 figs. [Col.]

2556.—Wolf, K. Studien über palaearktische Formiciden. I. Ber. Natw. Med. Ver. Innsbruck **35** (1912–14) 1915 pp. 39–52 18 figs. [Hym.]

2557.—Wolff, M. Bemerkungen über die Porizoninen-Gattungen *Isurgus* und *Tersilochus*, speziell über den *Meligethes*-Schmarotzer *Isurgus morionellus* Holmgr. Arch. Natg. Berlin **85** Abt. A Heft 3 (1919) 1920 pp. 139–150. [Hym.]

2558. Wolff, M. & Krausse, A. Publikationen von 1901 bis 1920. Arch. Natg. Berlin **85** Abt. A Heft 12 (1919) 1920 pp. 60–77.

Wolff, M. see Krausse, A. & Wolff, M.

2559.—Wolff, N. L. En ny dag-sommerfugl for den danske fauna. [*Lycaena alcon* F. new to the Danish fauna.] Flora og Fauna Copenhagen 1923 pp. 123–125. [Lep.]

2560.—Woodruff, L. B. A new species of *Polydrusus* Germar (Coleop.). J. New York Ent. Soc. **31** 1923 pp. 155–157.

2561.—Woodruff, L. B. Supplementary notes on *Ophiderma* Fairm. (Hemip.-Homop.). J. New York Ent. Soc. **31** 1923 pp. 188–190.

2562.—Woods, W. C. *Altica* or *Haltica*? Bull. Brooklyn Ent. Soc. **18** 1923 pp. 63–67. [Col.]

2563.—Woodworth, C. W. The wings of *Bombyx mori* (Lepid. Bombycidae). Ent. News Philadelphia **34** 1923 pp. 33–36.

2564.—Woodworth, H. E. & Ashcraft, J. B. The foot maggot, *Booponus intonsus*, Aldrich, a new myiasis-producing fly. Philippine J. Sci. Manila **22** 1923 pp. 143–155 8 pls. [Dipt.]

2565.—Wright, W. R. A preliminary account of the results of surveys for breeding places of mosquitoes in North Wales. Ann. Trop. Med. & Parasit. Liverpool **17** 1923 pp. 539–547.

2566.—Wright, W. S. Geometrid notes and descriptions. Lepidopterist Salem **3** 1920 pp. 125–127.

2567.—Wright, W. S. Expedition of the California Academy of Sciences to the Gulf of California in 1921. The Geometrid moths. Proc. Cal. Acad. Sci. San Francisco **12** 1923 pp. 113–115. [Lep.]

2568.—Wünsch, R. Massenflug von *Pyrameis cardui* L. Ent. Zs. Frankfort o. M. **37** 1923 p. 26. [Lep.]

2569.—[Yakhontov, A. A.] Яхонтов, А. А. Sur le gynandromorphisme des insectes. Bull. Soc. ent. Moscou **2** no. 2 1923 pp. xx–xxiii. [In Russian.]

2570.—[Yakhontov, A. A.] Яхонтов, А. А. Sur les unités taxonomiques (à propos de l'article de W. Bianki). Bull. Soc. ent. Moscou **2** no. 2 1923 pp. xxx—xxxiv. [In Russian.]

2571.—Yocom, H. B. The occurrence of telosynapis in the male germ cells of an Hemipteron, *Leptocoris trivittatus*, Say. J. Morph. Philadelphia **37** 1923 pp. 287—299 2 pls.

2572.—Yokoyama, K. Pale clouded yellow butterflies in Europe and Japan. Dobuts. Z. Tokyo **33** 1921 pp. 8—15 2 figs. [In Japanese.] [Abstract in Jap. J. Zool. Tokyo **1** 1922 p. (6).]

2573.—Yokoyama, K. On the scientific name of garden white butterflies in Japan. Dobuts. Z. Tokyo **33** 1921 pp. 384—389 6 figs. [In Japanese.] [Abstract in Jap. J. Zool. Tokyo **1** 1922 p. (6).]

2574.—Yokoyama, K. The variation in the wing spots of *Pieris rapae* L. in the spring generation. Dobuts. Z. Tokyo **33** 1921 pp. 429—438 6 figs. [In Japanese.] [Abstract in Jap. J. Zool. Tokyo **1** 1922 pp. (6—7).] [Lep.]

2575.—Yokoyama, K. On the scientific name of some species of the Pieridae. Konchu Sekai [Insect World] Gifu **25** 1921 pp. 251—256 4 figs. [In Japanese.] [Lep.]

2577.—Zacher, F. Wanzen im Auslandsgetreide. Arb. Biol. Reichsanst. Land- u. Forstw. Berlin **12** 1923 pp. 236—242. [Hem.]

2578.—Zangheri, P. Fauna di Romagna. Lepidotteri (Prima contribuzione). Mem. Soc. ent. ital. Genoa **2** 1923 pp. 13—49.

2579.—Zariquiey, R. Sobre el género *Troglocharinus* (Ins. Col.). Treb. Inst. catalana Hist. nat. Barcelona **3** 1918 pp. 283—294 5 figs.

2580.—Zariquiey, —. Llista de Crisomèlids catalans. Butll. Inst. catalana Hist. nat. Barcelona (2) **1** 1921 pp. 97—98. [Col.]

2581.—Zavrel, J. & Thienemann, A. Die Metamorphose der Tanyipinen. II. Teil. Arch. Hydrobiol. Stuttgart Supp. vol. **2** 1921 pp. 655—784 76 figs. [Dipt.]

2582.—Zeck, E. H. Observations on a myrmecophilous Histerid. Austr. Nat. Sydney **4** 1918 pp. 20—21 1 pl. [Col.]

2583.—Zeck, E. H. Some myrmecophilous insects. Austr. Nat. Sydney **5** 1922 pp. 58—59.

2584.—Zeleny, Ch. The temperature coefficient of a heterozygote with an expression for the value of a germinal difference in terms of an environmental one. Biol. Bull. Wood's Hole Mass. **44** 1923 pp. 105—112.

2585.—Zerny, H. Zwei neue paläarktische Noctuiden. Verh. zool.-bot. Ges. Wien **65** 1915 pp. (222)—(225) 2 figs. [Lep.]

2586.—Zerny, H. Formenkreis von *Lythria purpuraria*, L. Verh. zool.-bot. Ges. Wien **66** 1916 pp. (18)—(25) 2 figs. [Lep.]

2587.—Zerny, H. Die Beschreibung einer neuen paläarktischen Pyralide. Verh. zool.-bot. Ges. Wien **66** 1916 pp. (147)—(149) 2 figs. [Lep.]

2588.—Zerny, H. Bemerkungen und Richtigstellungen zu Seitz, Grossschmetterlinge der Erde, Paläarktische Fauna Bande II und III. Verh. zool.-bot. Ges. Wien **68** 1918 pp. (36)—(44). [Lep.]

2589.—Zetek, J. The Panama Canal species of the genus *Anopheles*. Proc. Med. Assoc. Isthmian Canal Zone 1920 **13** 1923 pp. 29—56 4 pls. [Dipt.]

2590.—Zimmermann, A. Die Schwimmkäfer des Deutschen Entomologischen Museums in Berlin-Dahlem. Arch. Natg. Berlin Abt. A **83** Heft 12 (1917) 1919 pp. 68—249 3 pls. 22 figs. [Col.]

2591.—Zimmermann, A. Neue Schwimmkäfer. Ent. Blätter Berlin **19** 1923 pp. 31—40. [Col.]

2592.—Zimmermann, F. Ueber die Fauna der Halophytenstandorte Südmährens. Verh. zool.-bot. Ges. Wien **72** (1922) 1923 pp. (15)—(18).

2593.—Zweigelt, F. Biologische Studien an Blattläusen und ihren Wirtspflanzen. Verh. zool.-bot. Ges. Wien **68** 1918 pp. 124—142 4 figs. [Hom.]

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## Bibliography.

BRYK, sphragidological literature, 380, papers by Aurivillius, 384; CRESSON, papers by Kertész, Ent. News 34 1923 p. 128; CRESSON & REHN, general, 537; FLETCHER, Indian entomology, 1922, 760; KLEINE, bark-beetles, 1262; LINDSEY, authorship of Encycl. Méth., 1409; MAHEUX, papers by Provancher, 1472; MINCK, *Oryctes nasicornis*, pre-Linnean literature, 1583; MORSTATT, plant pest literature 1922, 1606; MUIR, D. Sharp's Hawaiian works, Proc. Hawaiian Ent. Soc. 5 335–339; MUNSTER, Scandinavian Coleoptera, 1643; PORTER, Chilean Neuroptera, 1859; REBEL, von Berge's Schmetterlingsbuch, 1934; STRAND, papers by Strand, 2253; WOLFF & KRAUSSE, list of papers, 2558.

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## Collections.

ELWES, J. H., Ent. Mo. Mag. London 59 1923 pp. 19–20; JENKINSON, F. J. H., Ent. Mo. Mag. London 59 1923 pp. 261–262; MACGILLIVRAY, Maskell collection of Coccidae, Science 57 p. 734; ROTHSCHILD, N. C., Entomologist 56 1923 pp. 284–286; WATKINS, butterflies of Banks collection, 2490.

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### GEOGRAPHY OR FAUNISTIC.

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*Insecta*: KOLBE, in glacial and post-glacial times, 1283; *Coleoptera*: KESSEL, geographical distribution of Laemophloeinae, 1222; PORTEVIN, monograph of Necrophorini, 1860; SCHMIOT, monograph of Aphodiidae, 2074.—*Hymenoptera*: ÉMERY, distribution of Formicidae, 681, catalogue of Myrmicinae, 683; MEADE-WALDO, Apidae subfam. Prosopidinae, catalogue, 1530.—*Lepidoptera*: SEITZ, southern limits of Palaeartic fauna in Asia, 2132.—*Hemiptera*: CHAMBERLIN, monograph of Tachardiinae (Coccidae), 439; FERRIS, Psyllidae, 737; MELICHAR, catalogue of Acanaloniidae, Flatidae, Ricaniidae, 1541.—*Anoplura*: FERRIS, 735.—*Orthoptera*: UVAROV, Old World Cyrtacanthacrini (Arididae), 2393.

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*Insecta*: STEPHENSEN, Greenland, 2241.—*Coleoptera*: BERNHAUER, Staphylinid, 170; MUNSTER, 1644, Carabidae, 1647.—*Lepidoptera*: REBEL, Tineidae, Greenland, 1917.—*Hymenoptera*: WATERSTON, Ichneumonoidea, 2484.—*Diptera*: BECKER, 124.

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Pribilof Islands, Alaska. *Coleoptera*: WICKHAM, 2527.—*Hymenoptera*: VIERECK, 2435.—*Lepidoptera*: FORBES, 768.—*Trichoptera*: BANKS, Limnephilidae, 80.—*Diptera*, MALLOCH, 1489; WALTON, 2471; ALEXANDER, 20.—*Hemiptera*: MCATEE, Heteroptera, 1444; PATCH, Aphididae, 1747.—*Anoplura*: MCATEE, 1444.—*Mallophaga*: FERRIS, 736.—*Mecoptera*: BANKS, Panorpidae, 81.—*Orthoptera*: HEWARD, Blattidae, 961.—*Apterygota*: MCATEE, 1444.

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Madeira. *Coleoptera*: COCKERELL, 494.—*Lepidoptera*: COCKERELL, 496.—*Hemiptera*: GREEN, Coccidae, 897.

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Cocos-Keeling Is. *Hymenoptera*: EMERY, Formicidae, 678.—*Odonata*: CAMPION, 415.

Guam I. *Diptera*: MALLOCH, Atherigona, 1490.

Bismarck Arch. *Coleoptera*: EGGERS, Scolytidae, 669; PIC, Cerambycid, 1802.—*Lepidoptera*: PROUT, Pardodes, 1886.—*Diptera*: SCHMITZ, Phoridae, 2084.

Solomon Is. *Coleoptera*: CHAMPION, Nosodendridae, 443.—*Lepidoptera*: PROUT, Cosmethis, 1886.

Woodlark I. *Coleoptera*: JORDAN, Eclonerus, 1174; THÉRY, Buprestidae, 2319.—*Lepidoptera*: PROUT, Pardodes, 1886.

Louisiade Is. *Lepidoptera*: PROUT, Nadagara, 1886.

Hawaiian Is. *Hymenoptera*: TIMBERLAKE, Chalcidoidea, 2343.—

*Lepidoptera*: SWEZLEY, 2280.—*Diptera*: ALEXANDER, Tipulidae, 25; BRYAN, 378; ILLINGWORTH, 1110.—*Hemiptera*: BRYAN, Halobates, 377; FULLAWAY, Coccidae, 822.

Galapagos Is. *Lepidoptera*: SCHAUS, Heterocera, 2052.

Marquesas Is. *Insecta*: WASHBURN, 2477.

Fiji Is. *Coleoptera*: PIC, 1787.—*Hymenoptera*: LYLE, Chelonus, 1441.—*Neuroptera*: ESBEN-PETERSEN, Dictyoleon, 698.

Loyalty Is. *Diptera*: FALCOZ, Streblidae, Nycteribiidae, 718.—*Orthoptera*: WILLEMS, Acrididae, Tettigoniidae, 2534, Valanga rouxi, Ann. Mag. Nat. Hist. Lond. (9) 12 1923 p. 357.

Lord Howe Is. *Coleoptera*: LEA, Lamellicornia, 1357.—*Diptera*: TOSNOIR, Rhypidae, 2353.

New Zealand. *Coleoptera*: HUDSON, catalogue, 1075.—*Hymenoptera*: LYLE, Ascogaster obscurator, 1441.—*Lepidoptera*: HUDSON, 1074; PHILPOTT, 1785.—*Trichoptera*: MOSELY, 1607.—*Zeugloptera*: PHILPOTT, Micropterygidae, 1785.—*Diptera*: TOSNOIR, 2352; ALEXANDER, Tipulidae, 29; EDWAARDS, Tipulidae, etc., 653, 663; MILLER, Empididae, 1579; MALLOCH, Muscaridae, 1490.—*Paecoptera*: TILLYARD, monograph, 2332.—*Plecoptera*: TILLYARD, Perlidae, 2333.—*Orthoptera*: CHOPARD, cavernicolous, 469.

## Palaearctic Region.

## (a) Collectively.

*Hymenoptera*: RUSCHKA, Eupelmidae, 2014; SANTSCHI, Formicidae, 2033.—*Diptera*: HENDEL, revision of Agromyzidae, 994.

## (b) Europe, collectively.

*Coleoptera*: JEANNEL, dispersal of *Tenebrio* in Europe, 1139.—*Hymenoptera*: FRIESE, bees of Europe, 799.—*Diptera*: DUVAL, Revision, revised, 826.

## (c) North Europe and Siberia.

*Coleoptera*: SAALAS, spruce beetles of Finland, 2023.—*Lepidoptera*: WETTSTEIN - WESTERHEIM, Swedish Lapland, 2517; SCHNEIDER, Norway (Maalselven), 2086.—*Diptera*: KIEFFER, Chironomidae, Courland, 1225.—*Hemiptera*: LUNDBLAD, Heteroptera, Sweden, 1438.—*Collembola*: WAHLGREN, Sweden, 2463.

## (d) British Isles.

*Insecta*: SHEPPARD, bibliography for 1922, 2155.—*Coleoptera*: PEARCE, Hebrides, 1752; BALFOUR-BROWNE, Hebrides, 78.—*Lepidoptera*: FASSNIDGE, Hampshire and Isle of Wight, 724; MANSBRIDGE, Lancashire and Cheshire, 1499; HANCOCK, Hebrides, 936.—*Hymenoptera*: MORLEY, British Proctotrypidae, 1600; LYLE, Cheloninae (Braconidae), 1442.—*Siphonaptera*: BAGNALL, Northumberland and Durham, 69.—*Hemiptera*: HUTCHINSON, Hebrides, 1106; THEOBALD & WALTON, list of Aphids of N. Wales, 2316; BUTLER, biology of British Heteroptera, 403; GREEN, list of British Coccidae, 895.

## (e) France.

*Insecta*: PÉNEAU, Ile de Ré, 1760.—*Coleoptera*: DESPAX, Toulouse, aquatic, 604; JEANNEL, Pyrenees, *Trechus*, 1137; HOULBERT, 1064; HOULBERT & MONNOT, Armorican Lamellicornia, 1066.—*Hymenoptera*: BENOIST, bees new to France, 139.—*Lepidoptera*: BERTHOUMIEU, Allier, 172; BROMBACHER, Alsace, 348; HEINRICH, Digne, 977; OBERTHUR, E. Pyrenees, catalogue, 1693; OBERTHUR & HOULBERT, Armorican butterflies, 1702.—*Diptera*: SÉGUY, France, Culicidae, 2124, Anthomyiidae of France, 2123; PIERRE, catalogue of Tipulidae, 1820.—*Hemiptera*: GUÉRIN & PÉNEAU, Armorican Heteroptera, 921.—*Collembola*: DENIS, 591.

## (f) Central and Eastern Europe.

*Insecta*: ESCHERICH, forest insects of Middle Europe, 704; JEANNEL, origin of Carpathian fauna, 1140; ZIMMERMANN, salt-marsh fauna of S. Moravia, 2592.—*Coleoptera*: AMMANN & KNABL, fauna of N.W. Tyrol, 41; CSIKI, list of Hungarian beetles, 544; MOTAS

& KNECHTEL, Rumanian water-beetles, 1608; MÜLLER, Tenebrionidae of Dalmatia, 1633; NETOLITZKY & VOGEL, Bembidiini of Germany, 1668; ULRICH, N.W. Balkans, Chrysomelidae, 2385.—*Hymenoptera*: ESBEN-PETERSEN, Denmark, Ichneumonidae, 697; KRYGER, Denmark, Ichneumonidae, 1309; SZABÓ, Formicidae of Hungary, 2283.—*Lepidoptera*: CROISÉ, Luxemburg, 540; GRABE, Ruhr district, 879; KNUDSEN, Jutland, 1280; MÜLLENBERGER, Luxemburg, 1627; SØNDERUP, Denmark, 2191; SCHAWERDA, Bosnia and Herzegovina, 2055.—*Neuroptera*: PONGRÁCZ, Chrysopidae of Hungary, 1840.—*Diptera*: CZÍZEK, Diptera of Moravia, 570; GUNDERMANN, Thuringia, 923; KERTÉSZ, Hungarian Sciomyzidae, 1219; LANDROCK, Moravian Mycetophilidae, 1342.—*Hemiptera*: BIANKI & KIRITCHENKO, Heteroptera of N. and Central Russia, etc., 193; GULDE, Heteroptera, Frankfort on Main, 922; HORVÁTH, Grosswardein, Hungary, 1054.—*Thysanoptera*: PRIESNER, Germany, 1873.—*Orthoptera*: SZILÁDY, list of Hungarian spp., 2290.—*Collembola*: IONESCU, Rumania, 1114.

## (g) South Europe and Mediterranean Basin.

*Coleoptera*: BÉNARD, Macedonia, *Rhyssemus*, 129; BLATTNY, Crete, Pselaphidae and Scymaenidae, 224; BOUCOMONT, Macedonia, Coprophagous Coleoptera, 281; CODINA, Catalan Cicindelidae, 497; ESCALERA, Iberian peninsula, *Asida* subg. *Glabrasida*, 699; FALZONI, Cirenaica, 723; FUENTE Y MORALES, Spain and Balearic Is., catalogue of Coleoptera, 821; IGLESIAS, Spain, Curculionidae, 1109; JORDÁ, Balearic Is., 1164; LESNE, Macedonia, Bostrichidae and Cleridae, 1384; PEYERIMHOFF, North Africa, 1776; ZARIQUIEY, list of Catalan Chrysomelidae, 2580.—*Hymenoptera*: GRAEFFE, Adriatic Coast, Ichneumonidae, 880; Adriatic Coast, 881; MAIDL, Balkans, Tenthredinoidea and Evaniiidae, 1473.—*Lepidoptera*: ANDRES & SEITZ, Egypt, 42; BUBAČEK, Balearic Islands, Pieridae, 387; Corsica, 388; BURESCH, Thrace and Macedonia, 397, 398; GALVAGNI, Lussin I., N. Adriatic, 840; RAGUSA, Aegeriidae of Sicily, 1901; STAUDER, South Italy, 2224; Illyro-Adriatic, 2230; TURATI,

Appennine Mts., 2367; WEISS, Catalonia, 2508.—*Neuroptera*: NAVÁS, Macedonia, 1655.—*Hemiptera*: GRAEFFE, Adriatic Coast, 882; ROYER, Macedonia and Albania, 2009.—*Orthoptera*: CHOPARD, Corsica, 465.

#### (h) Caucasus. West & Central Asia.

*Hymenoptera*: KUSNEZOW, Formicidae of Turkestan, 1316.—*Lepidoptera*: MILLER, Kars, Armenia, 1580.—*Hemiptera*: ARKHANGELSKAYA, Coccidae of Turkestan, 52.

#### Africa.

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Rodriguez I. *Diptera*: EDWARDS, Nematocera, 654; MALLOCH, Muscariidae, 1490.—*Odonata*: CAMPION, 415.

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#### Asia Tropical and Eastern.

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*Coleoptera*: CHAMPION, Oriental Nosodendridae, 443; FLEUTIAUX, Japan, Eucnemidae, 762; JEANNEL, Oriental Trechinae, 1132; KLEINE, Brenthidae of Malay Peninsula, 1265; d'ORCHYMONT, Indian Hydrophilidae,

1722.—*Hymenoptera*: DUTT, Indian Ichneumonidae, 641; TAKEUCHI, Formosa, Tenthredinoidea, 2304.—*Lepidoptera*: NIRE, Japan, Rhopalocera, 1377; SONAN, Formosa, 2188.—*Diptera*: BARNES, Anophelines of Siam, 95; BARRAUD, Indian Culicines, 108; BRUNETTI, monograph of Indian Pipunculidae, Syrphidae, Conopidae, Oestridae, 372, Indian Stratiomyidae, 373; SENIOR-WHITE, catalogue of Indian Culicidae, 2138, catalogue of Indian Bombyliidae, 2139.—*Hemiptera*: SONAN, Formosa, Cicadidae, 2190; TAKASHI, Formosa, Aphididae, 2298.—*Isopota*: SILVESTRI, termites of Barkuda I., India, 2163.—*Plecoptera*: OKAMOTO, Japan, 1713.—*Odonata*: FRASER, revision of Indian spp., 785; LAIDLAW, Malay Peninsula, 1331, Aeschninae of Burma and Siam, 1332.—*Orthoptera*: CHANG, list of Chinese Acrididae, 447; HEBARD, Indian Forficulidae, 962.

#### Asiatic Archipelago.

*Coleoptera*: ACHARD, Scaphidiidae, 2a; EGgers, Scolytidae, 669; GESTRO, Paussid, Philippines, 856; HELLER, Erotylidae, 981; KLEINE, *Ectocemus*, 1255; SCHULTZE, Curculionidae, 2101.—*Lepidoptera*: MEYRICK, Microlepidoptera of Java, 1573; MOULTON, Rhopalocera of Pulo Condore, 1609.—*Diptera*: FREY, Chloropidae of Philippines, 795.—*Hemiptera*: MOULTON, Malayan Cicadidae, 1611.—*Thysanoptera*: KARNY, 1197; KELLY, list of New Guinea Thripidae, 1212.—*Isopota*: OSHIMA, Sumatran termites, 1732.—*Orthoptera*: HANITSCH, Blattidae, 938, 939; HEBARD, *Misythus*, 957; KARNY, Tettigoniidae and Gryllacridae, 1200; WILLEMSE, Dutch E. Indies, 2533.

#### Australia and Tasmania.

*Coleoptera*: CARTER, *Melobasis*, 424; FERGUSON, Curculionidae, 732; LEA, Copridae, 1353, Staphylinidae, 1354, beetles of Nuyts Arch., 1355, *Monolepta*, 1356, Aphodiidae, 1357; WEISE, Chrysomelidae and Coccinellidae, Queensland, 2507.—*Lepidoptera*: TINDALE, list of butterflies of Groot Eylandt, 2344.—*Lepidoptera*: TURNER, Gelechiinae, 2371, new moths, 2372, Micro-Lepidoptera, 2373, 2374, Anerastiinae, 2375.—*Diptera*: JOHNSTON &

HARDY, *Sarcophaga*, 1160.—*Hemiptera*: HALE, Notonectidae, 930.—*Thysanoptera*: KELLY, list of Australian Thripidae, 1212.—*Embioptera*: TILLYARD, W. Australia, 2338.—*Orthoptera*: TINDALE, Nuyts Arch., 2345, Australian Mantidae, 2346.

#### North America.

*Coleoptera*: BEAULIEU, Eucnemidae, 120; BEAULNE, Canada, 121; NICOLAY & WEISS, *Brachys*, 1674.—*Hymenoptera*: MICHEL, Mutillidae of Minnesota, 1577; MUESEBECK, Ichneumonidae, 1615.—*Lepidoptera*: DYAR, short-winged Psychidae, 642.—*Diptera*: COLE, Therevidae, 595; JOHNSON, Platypozidae, 1157; MATHESON & SHANNON, 1523; PHILLIPS, Trypetidae, 1782; SHANNON, Nearctic Calliphoridae, 2149; STEIN, Anthomyiidae, 2234; VAN DUZEE, Dolichopodidae, 2406.—*Hemiptera*: BRITTON, &c., Connecticut, monograph, 344; HARTZELL, N. American *Empoasca*, 947; HUNGERFORD, Nepidae of N. America, 1089; LAWSON, Membracidae of Kansas, 1351; METCALF, Fulgoridae of N.E. America, 1561; VAN DUZEE, Thyreocorinae, 2399.—*Thysanoptera*: WATSON, revision of N. American spp., 2495.

#### Central America.

*Coleoptera*: KLEINE, *Arrhenodes* (Brenthidae), 1256.—*Diptera*: DYAR, Culicidae of Panama, 648.—*Isoptera*: DIETZ & SNYDER, Termitidae of Panama Canal Zone, 606.

#### Antilles.

*Coleoptera*: LENG & MUTHLER, West Indian Lycidae, Lampyridae, Cantharidae, 1872.—*Diptera*: Root, blood-sucking spp. of Porto Rico, 1992.—*Hemiptera*: BARBER, Heteroptera of Porto Rico, 89; GOWDEY, Aleurodidae of Jamaica, 878.

#### South America (including Trinidad).

*Insecta*: COSTA LIMA, list of Brazilian insects and food-plants, 523.—*Coleoptera*: BRÈTHES, catalogue of Chilean Coccinellidae, 321; CAMPOS R., Cicindelidae of Ecuador, 421; GEBIEN, Camariidae, 851; VARAS ARANGUA, Cicindelidae of Chile, 2416.—*Hymenoptera*: SANTSCHI, Formicidae, 2032.—

*Lepidoptera*: KÖHLER, Rhopalocera of Argentina, 1282.—*Diptera*: AUSTEN, Pantophthalmidae, 64.—*Hemiptera*: BAKER & MOLES, Aleurodidae of S. America, 75; BONDAR, Aleurodidae of Brazil, 249.—*Odonata*: CAMPOS R., dragonflies of Ecuador, 420; MARTIN, dragonflies of Chile, 1509; WILLIAMSON, Trinidad, 2543.—*Orthoptera*: HEBARD, Acrididae of Colombia, 959.

#### III.—SYSTEMATIC.

##### GENERAL.

The use of insects in medicine among the ancients p. 553, ARNDT Deutsche ent. Zs. 1923.

Psychological powers in insects pp. 293–321, BRUN Mitt. Ent. Zürich 5 1920.

Intracellular symbiosis in insects pp. 146–339, 344–353, BUCHNER Tier u. Pflanze in intracellulärer Symbiose, 1921.

The Forest Insects of Central Europe, ESCHERICH Berlin, Parey, 1923, xii+663 pp. 335 figs.

Entomology with special reference to its ecological aspects, FOLSOM London 1923 502 pp. 5 pls. 308 figs.

†Climate and the insect world of Central Europe during and after the Ice Age, KOLBE D. ent. Zs. 1923 pp. 1–32.

†Orders of insects, fossil and recent pp. 151–171, KRAUSSE & WOLFF Arch. Natg. 85 A 3 1920.

Manual of Entomology, LEFROY London 1923 xvi+541 pp. 4 pls. 179 figs.

Notes on East African Insects collected in 1915–1922, LOVERIDGE Proc. Zool. Soc. 1923 pp. 1013–1041.

External Insect Anatomy: A guide to the study of Insect Anatomy and an introduction to systematic Entomology, MACGILLIVRAY, Urbana, Ill., Scarab Co., 1923 viii+388 pp.

List of Papers on British Entomology published during 1922, SHEPPARD Brit. Ass. Rep. Corresp. Socos. 1923 pp. 515-578.

†The Lower Permian Insects of Kansas, TILLYARD Ent. News 34 pp. 292-295.

†List of Fossil Insects from the Upper Triassic Beds of Denmark Hill, Ipswich, Queensland p. 481, TILLYARD Proc. Linn. Soc. N.S.W. 48.

Catalogue of Coleoptera, Spain and Balearic Is. 5 pp. 126-141; 6 pp. 21-36 40-55 62-77 87-102 118-133 6, DE LA FUENTE Y MORALES Bol. Soc. ent. España.

Keys to genera of Coleoptera of France, figs., pp. 209-240 29 1920; pp. 241-288 30 1921, HOULBERT Bull. Soc. sci. méd. Rennes.

List of the New Zealand species of Coleoptera, HUDSON Trans N. Z. Inst. 54 pp. 353-399.

A preliminary study of the "blind" beetles of Bihar, JEANNELL Bull. Soc. Stiinte Cluj 1 pp. 411-472.

Coleoptera of the Balearic Islands pp. 103-109, 129-137, JORDA Butll. Inst. catalana Hist. nat. 3.

List of Adephaga and Hydrophilidae of Rumania pp. 105-107, MOTAS & KNECHTEL Bull. Acad. roumaine 7 1921.

The Coleoptera of Pearson Island, LEA Trans R. Soc. S. Australia 47 pp. 355-360 1 pl.

Coleoptera of Latium, lists pp. 46-63, 78-85, 132-145, 160-177, LUIGIONI Atti Pont. Accad. Nuovi Lincei 76.

Life-history of German Lamellicorn beetles pp. 37-39, 41-43, 45-49, OHAUS Ent. Rdsch. 40.

Beetles in Panzer's "Fauna insectorum Germaniae initia" pp. 102-104 107-108 111-112 115-116 119-134, RAPP N. Beitr. syst. Ins. 2.

Spruce beetles of Finland, development, biology, distribution, keys, Part II, x+746 pp. (figs.), SAALAS Ann. Acad. Scient. Fennicae Ser. A, 22.

Stigmata of Coleopterous larvae pp. 1-58, STEINKE Arch. Naturg. 85 A 7 1920.

The head-capsule of Coleoptera, STICKNEY Illinois Biol. Monogr. 8 pp. 1-104 26 pls.

Notes on Coleopterous larvae, p. 1 (figs.), VERHOEFF Arch. Natg. 89 A 1.

Structure of mouth-parts of Coleopterous larvae pp. 115-125, VERHOEFF Žs. wiss. Insektenbiol. 18.

Coleoptera of the Pribilof Islands, Alaska, WICKHAM N. Amer. Fauna 46 pp. 150-157.

## COLEOPTERA.

Coleoptera of Whitefish Point, Michigan, ANDREWS Pprs. Mich. Acad. Sci. 1921 pp. 293-390.

Coleoptera of Canada, BEAULNE Nat. Canad. 50 pp. 68-71, 90-95, 117-120, 140-143.

Wing nervation of Coleoptera, pp. 129-134 (fig.), BERNET KEMPERS Tijdschr. Ent. 66.

Mouth-parts of Lamellicorn beetles p. 145 (figs.), BERTIN Ann. Soc. linn. Lyon 69.

Criticism of Dr. Jeannel's work on "blind beetles" of Bihar Mts. (Hungary), BOKOR Rovart. L. 26 p. 78.

Coprophagous Coleoptera from Macedonia p. 382, BOUCOMONT Bull. Mus. Hist. nat. Paris 1923.

Classification of Swedish Coleoptera pp. 147-157, CEDERGREN Ent. Tidskr. 44.

Notes on beetle fauna of Hungary, CSIKI Rovart. L. 26 p. 39.

Coleoptera collected in Trebizond and Gümisch-Chane districts of Asia Minor, EICHLER Polskie Pismo Ent. 2 pp. 54-63.

Corrections to Coleoptera Neerlandica III, p. 224, EVERTS Ent. Ber. 6.

Coleoptera Neerlandica, new records pp. 209-224, EVERTS Ent. Ber. 6.

Metamorphosis of some Argentine Coleoptera, pp. 254-262 (fig.), FRERS Physis 6.

## CICINDELIDAE.

Cicindelidae of Cheboygan and Emmet Counties, Michigan, BLANCHARD Pprs. Mich. Acad. Sci. 1921 pp. 396-421.

Cicindelidae of Ecuador pp. 449-452, CAMPOS R. Rev. chilena Hist. nat. 25.

Catalogue with keys, figs., to Cicindelidae of Catalonia pp. 245-299, CODINA Treb. Inst. Catal. N. H. Barcelona 2 1916.

A list of Indian Cicindelidae, DOVER & RIBEIRO Rec. Ind. Mus. 25 pp. 345-363.

Cicindelidae of Chile pp. 28-61 (fig.) key p. 33, VARAS ARANGUA Rev. chil. Hist. nat. 25.

*Cicindela campestris* f.n. *exapicalis* p. 261 and key to Spanish forms, CODINA Treb. Inst. Catal. Hist. Nat. Barcelona 2 1916.—*C. gallica* Brullé, aberration p. 18, TAREL Misc. ent. 27.—*C. gallica* var. n. *tareli* Italian Alps p. 14, PIO Echange 39.—*C. gormazi* var. n. *izquierdoi* Chile p. 56, VARAS ARANGUA Rev. chil. Hist. nat. 25.—*C. lesnei* sp. n. (fig.) Tonkin p. 7, BABIAULT Bull. Soc. ent. Fr. 1923—*C. sylvicola* notes on, p. 277, REINECK D. ent. Zs. 1923.—*C. lyoni* var. *normandi* Bedel raised to a geographical race p. 204, HORN Ent. Mitt. 12.—*C. muata* *parallelestriata* p. 29 Belgian Congo, *congoensis* *phyletica* p. 30 B. East Africa subspp. n., HORN Ent. Blätter 19.—*C. rufiventris* subspp. n. *nigroconfluens* Costa Rica p. 322, *schwarzi* Panama p. 323 (fig.), *viridiflavescens* San Domingo p. 329 spp. n., HORN Zool. Jahrb. Abt. System. 47.

*Collyris cyaneipalpis* Nilgiri Hills p. 315, *convergente-frontalis* Tonkin p. 316 spp. n., HORN t.c.

*Dromica nobilitata* subspp. n. *interruptemaculata* B. E. Africa p. 316, HORN t.c.

*Megacephala pulchra* subspp. n. *pseudo-blackburni* W. Australia p. 30, HORN Ent. Blätter 19.

*Odontochila cayennensis*, key to subspp., subspp. n. *bicolor* Brazil p. 214, HORN Ent. Medd. 14.

*Phaeoxantha epipleuralis* sp. n. p. 212, *cruciata* Brill. subspp. n. *pilosula* p. 213 Brazil, HORN t.c.

*Pogonostoma chalybaeum* subsp. n. *rugosoglabra* (= *spinipenne* Horn) Madagascar p. 311 (fig.), HORN Zool. Jahrb. Abt. f. System. 47.

*Prothyma*, key to species p. 361, *hopkinsi* subsp. n. *rotundatocupresscens*, p. 359, *banksi* sp. n. p. 360, Philippines, HORN Phil. J. Sci. 22.—*P. versicolor* subsp. n. *duplicata* B. E. Africa p. 318, HORN Zool. Jahrb. Abt. f. System. 47.

*Therates crebrepunctatus* sp. n. Burma p. 215, HORN Ent. Medd. 14.—*T. erinys* subsp. n. *crebrepunctatus* Borneo p. 317, HORN Zool. Jahrb. Abt. f. System. 47.

## CARABIDAE.

Tableaux de détermination des Carabidae de la faune franco-rhénane [cont'd.], BARTHE Misc. ent. 26 & 27 pp. 433-496 sep. pag.

Anomalies in two Argentine and Uruguayan Carabids pp. 356-357 (fig.), DALLAS Physis 6.

List of Bembidiini of E. Prussia pp. 55-73, NETOLITZKY & VOGEL Schr. physik. Ges. Königsberg 57 1917.

The classification of the Carabidae, p. 234, SLOANE Trans. Ent. Soc. 1923.

Revision of Oriental spp. of Trechinae, p. 393, JEANNEL Ann. Mag. N. H. (9) 12.

The phylogeny of the Ditominae, STICHEL Zs. wiss. Insektenbiol. 18 pp. 41-50, 81-100, 145-162, 209-242.

*Abacetus henryi* sp. n. Ceylon, India p. 238, ANDREWES Spolia Zeylanica 12.

*Acupalpus horni* sp. n. Ceylon, India p. 237, ANDREWES t.c.

*Aëpopsis robinii*, larva, p. 56 (figs.), BOLIVAR Y PIELTAIN Bol. Soc. esp. Hist. nat. 23.

*Agonochila ovalis* sp. n. Queensland p. 39, SLOANE Proc. Linn. Soc. N.S.W. 48.

*Agonotrechus* gen. n. p. 428 (type *Trechus birmanicus*), andrewesi sp. n. India p. 430 (fig.), JEANNEL Ann. Mag. N.H. (9) 12.

*Agonum sordidum* subsp. n. *griseellii* Adriatic coast p. 151, SCHATTZ-MAYR Boll. Soc. Adriat. 26 2 1912.

*Allocota cyanipennis* sp. n. Philipines p. 305, HELLER Phil. J. Sci. 23.

*Amara aulica* subsp. n. *abruzzensis* p. 131 Abruzzia, SCHAUBERGER Ent. Anz. 3.—*A. brucei* p. 276, *hypselia* p. 277, spp. n., Mt. Everest, ANDREWES Ann. Mag. N. H. (9) 11.—*A. makólskii* sp. n. Volhynia p. 139, ROUBAL Ent. Blätter Berlin 19.—*A. pueli* sp. n. Morocco p. 105, ANTOINE Bull. Soc. Sci. nat. Maroc 3.—*A. tomoricensis* sp. n. Albania, p. 108, MÜLLER Boll. Soc. ent. ital. 55.

Amorphomerini new tribe, *Amorphomerus* gen. n. for *Trimerus* Chaud. (nom. praeocc.) p. 249, SLOANE Trans. Ent. Soc. 1923.

*Anaulacus sericeipennis* subsp. n. *philippensis*, Philippines fig. p. 302, HELLER Phil. J. Sci. 23.

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*Anopthalmus* s. str., specific determination and key to some species p. 160, *erebus* subsp. n. *kraussi* p. 162, WINKLER Koleopt. Rdsch. 10.—*A. hungaricus* Csiki, larva pp. 162–165 (fig.), DUDICH Ann. Mus. Nat. Hung. 20.

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*Aulacolius* gen. n. (Odacanthini), *triordinatus* sp. n. N. Australia p. 32, SLOANE Proc. Linn. Soc. N.S.W. 48.

*Axonya* gen. n. p. 679, *championi* sp. n. Punjab p. 680, ANDREWES Ann. Mag. N. H. (9) 12.

*Bembidion hyperboraeorum* sp. n. Norway p. 238, MUNSTER Norsk Ent. Tidsskr. 1.

*Bembidium braminum* sp. n. Madras p. 442, ANDREWES Ann. Mag. N. H. (9) 12.—*B. maroccanum* p. 102, *hustachei* p. 103, spp. n. Morocco, ANTOINE Bull. Soc. Sci. nat. Maroc 3.—*B. nivicola* sp. n. Mt. Everest p. 275, ANDREWES Ann. Mag. N. H. (9) 11.—*B. splendens* p. 95, *eutherum* p. 96, *phaedrum*, *xestum* p. 97, *clarum* p. 98, *exquisitum* p. 99, *yunnanum*, *tambra* p. 100, spp. n. Himalayas and Yunnan, ANDREWES Ent. Mo. Mag. 59.

*Brachynus*, key to Adriatic spp. p. 68, key to Italian and Balkan spp. p. 73, MÜLLER Boll. Soc. Adriat. Sci. nat. 25 1911.—*B. lesnei* sp. n., Siam p. 222, ANDREWES Ann. Mag. N. H. (9) 12.—*B. punctaticollis* sp. n. China p. 65, HELLER Ent. Blätter 19.

*Broter* gen. n. *ovicollis* sp. n. Madras p. 449, ANDREWES Ann. Mag. N. H. (9) 12.

*Calathus mollis* and *melanocephalus* distinct spp. p. 46 (figs.), GRIDELLI Boll. Soc. Adriat. 26 2 1912.

*Carabus* de la région franco-rhénane, revision, BARTHE Misc. ent. 26 pp. 73–76; 27 pp. 1–5.

*Carabus*, hybrid p. 37 Switzerland, BORN Schweizer Ent. Anz. 1 1922.—*C. cancellatus*, races in Poland pp. 63–82 (fig.), KUNTZE Polskie Pismo Ent. 2.—*C. cancellatus* v. *emarginatus* a. n. *zoufali* p. 80, FLEISCHER Casopis 19.—*C. monticola* notes on, Alps p. 13, BORN Soc. ent. 38.—*C. famini* subsp. n. *atlantis* Morocco p. 12, ALLUAUD Bull. Soc. Sci. nat. Maroc 3.—*C. lateralis* subsp. n. *salamantinus*, *martinezii*, Spain, p. 453, BOLIVAR Y PIELTAIN Bol. Soc. esp. Hist. nat. 22.—*C. monilis* var. n. *buresi* (fig.) Bulgaria p. 1, HANUS Casopis 20.—*C. rugosus* var. n. *barnolai* Barcelona p. 74, MAS DE XARXAS Butl. Inst. catal. Hist. nat.

21 1921.—*C. splendens* subsp. n. *kricheidorffi* synonymy, p. 33, LE MOULT Misc. ent. 27.—*C. splendens* and *punctatoauratus* hybrid *andronnensis*, synonymy p. 33, LE MOULT Misc. ent. 27.—*C. violaceus* f.n. *pseudomülleri* p. 136, *catenulatus* f.n. *secundarioflicatus* p. 138, *catenulatus* teratological specimen p. 141, figs., CODINA Butl. Inst. catal. N. H. 21 1921.

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*Colpodes euparyphus* Madras p. 448, *sikkimensis* p. 683, *vikara* p. 684, *vulpinus*, *impunctatus* spp. n. Sikkim p. 685, ANDREWES Ann. Mag. N. H. (9) 12.—*C. fletcheri* sp. n. Ceylon p. 240, ANDREWES Spolia Zeylanica 12.

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*Cymindis*, key to palaeartic pp. 1-15, REITTER Wiener ent. Ztg. 40.—*C. longstaffi* sp. n. Mt. Everest p. 277, ANDREWES Ann. Mag. N. H. (9) 11.

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*Dicrochile punctulata* sp. n. Australia p. 36, SLOANE Proc. Linn. Soc. N.S.W. 48.

*Disphaericini*, new tribe for *Disphaericus* p. 248, SLOANE Trans. Ent. Soc. 1923.

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*Dromius indicus* Sikkim p. 686, *adoxus* Kumaon spp. n. p. 687, ANDREWES Ann. Mag. N. H. (9) 12.

*Duvalites redtenbacheri* subsp. n. *incelatus* Roumania p. 432 (fig.), JEANNEL Bul. Soc. Stiinte Cluj 1.

*Duvalius cailloli* subsp. n. *sicardi*, cavernicolous, Alpes-Maritimes, p. 317, FAGNIEZ Bull. Soc. ent. Fr. 1922.

*Dyschirius* key to Australian, *wilsoni* sp. n. Victoria p. 17, SLOANE Proc. Linn. Soc. N.S.W. 48.—*D.*, key to European and other Palaeartic pp. 33-120, MÜLLER Koleopt. Rdsch. 10.—*D.*, key to Norwegian p. 244, *septentrionum* p. 248, *norvegicus* p. 249 spp. n. Norway, MUNSTER Norsk Ent. Tidsskr. 1.—*D. simulator* sp. n. p. 105, *punctatus* subsp. n. *albanicus* Albania, p. 107, MÜLLER Boll. Soc. ent. ital. 55.

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*Euplynes marginatus* sp. n. Ceylon p. 241, ANDREWES Spolia Zeylanica 12.

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*Gnophodes* gen. n. p. 244, *pearsoni* sp. n. Ceylon p. 245, ANDREWES Spolia Zeylanica 12.

*Harpaliseus punctulatus* sp. n. Madras p. 447, ANDREWES Ann. Mag. N. H. (9) 12.

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*Lissopogonus* gen. n. p. 213, *glabellus* sp. n. Sikkim p. 214, ANDREWES Ann. Mag. N. H. (9) 12.

*Macrochilus ruficollis* sp. n. (fig.), Philippines p. 296, HELLER Phil. J. Sci. 23.

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*Molops tomoricensis* sp. n. Albania p. 109, MÜLLER Boll. Soc. ent. ital. 55.

*Myrmecodemus* gen. n. (Odacanthini), type *Casnonia riverinae* Sl. Australia p. 33, SLOANE Proc. Linn. Soc. N.S.W. 48.

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*Neoduvalius* subgen. n. see *Trechus*.

*Neotrechus* subgen. n. see *Trechus*.

*Notiophilus pusillus*, *reitteri*, notes on, pp. 239–240, MUNSTER Norsk Ent. Tidsskr. 1.

*Notonomus dehiscens* p. 24, *hopsoni*, *ellipticus* p. 25, *curvicollis* spp. n. Australia p. 26, SLOANE Proc. Linn. Soc. N.S.W. 48.

Odacanthini, key to Australian genera p. 30, synonymy, SLOANE Proc. Linn. Soc. N.S.W. 48.

*Oesyperus* gen. n. p. 444, *unctulus* p. 445, *planus*, *pygmaeus* spp. n. Madras p. 446, ANDREWES Ann. Mag. N. H. (9) 12.

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*Ophonomius* gen. n. for *Parophonus hirsutulus* Dej. p. 72, SCHAUBERGER Ent. Anz. 3.

*Ophonus zigzag* Costa, an aberration of *puncticollis* var. *parallelus* Dej. ? 2 pp., LUIGIONI Ann. Mus. zool. R. Univ. Napoli 5 no. 5.—*O. diffinis* description of larva p. 150 (figs.), EMDEN Arch. Naturg. 84 A 10 1920.

*Orotrechus* subgen. n. see *Trechus*.

*Pachycarus cyaneus* var. n. *limbatus* Greece p. 13, PIC Échange 39.

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*Physodera eburata* Philippines, *bifasciata* Borneo spp. n. figs. p. 304, HELLER Phil. J. Sci. 23.

*Platynoderus minutus* subsp. n. *obtusangulus* Albania p. 112, MÜLLER Boll. Soc. ent. ital. 55.

*Platymetopus pictus* sp. n. Ceylon, India, Arabia p. 233, ANDREWES Spolia Zeylanica 12.

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*Poecilus koyi* subsp. n. *venetus* S. Tyrol p. 129, SCHAUBERGER Ent. Anz. 3.

*Pogonus meridionalis* var. n. *barthei* France, *punctulatus* var. n. *clermonti*, ab. n. *cyanoderus* Caucasia p. 89, PUEL Misc. ent. 26 (rectification 27 p. 14).

*Polyhirma* key to species p. 568, *clathratipennis* sp. n. Tanganyika Terr. p. 567 (figs.), BERNARD Bull. Mus. Hist. nat. Paris 1923.

*Prosopogmus opacidermis* p. 20, *interstitialis* spp. n. N.S.W. p. 21, SLOANE Proc. Linn. Soc. N.S.W. 48.

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*Tapinopterus* (*Crisimus*) *gestroi* sp. n. Albania p. 110, MÜLLER Boll. Soc. ent. ital. 55.

*Taridius stevensi* sp. n. Sikkim p. 689, ANDREWES Ann. Mag. N. H. (9) 12.

*Teratidium parallelum* sp. n. N. Australia p. 19, SLOANE Proc. Linn. Soc. N.S.W. 48.

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*Trechus* key to Oriental p. 416, *imaicus* (fig.) p. 421, *cameroni* (fig.) p. 422, *pumilio* (fig.) p. 424 India, *bakeri* (fig.) Philippines p. 426 spp. n., JEANNEL Ann. Mag. N. H. (9) 12.—*T.* key to subgenn., subgenn. n. *Aphaenopidius* (*treulandi*), *Neoduvallius* (*reitteri*, *eurydice*), *Typhlotrechus* (*bilimeki*), *Aphaenopsis* (*apfelbecki*), *Neotrechus* (*dalmatinus*, *paganettii*), *Orotrechus* (*müllerianus*) p. 25, MÜLLER Boll. Soc. Adriat. Sci. nat. 27 1 1913.—*T. asturicus*, *bigerricus* p. 166, *sharpi* p. 168, *gallaecus*, *lusitanicus* p. 169, *bepmalei* p. 170 spp. n., *latebricola* subsp. n. *aranensis* p. 169, catalogue p. 171 and key to Pyrenean species, JEANNEL Bull. Soc. Hist. nat. Toulouse 49 1921.—*T. birmanicus* see *Agonotrechus*.—*T. bilimeki* subsp. n. *circovichi* p. 22, *hirtus* subsp. n. *tolminensis* p. 23, *ravasinii* p. 26, *nivalis* p. 27 Italy, MÜLLER Atti Acc. ven.-trent. 12-13 1922.—*T. (Pheggomisetes) subgen. n.* *buresi* sp. n. (fig.) Bulgaria p. 2, KNIRSCH Casopis 20.—*T. (Anophthalmus) egonis* sp. n. p. 101, *hirtus* subsp. n. *heteromorphus* p. 102, *inhumeralis* p. 103, *staudacheri* p. 104, Carniola, MÜLLER Wiener ent. Ztg. 40.—*T. kosciuskoanus* p. 27, *australiensis* p. 28, *gippslandicus*, *bitinctus* spp. n. Australia p. 29, SLOANE Proc. Linn. Soc. N.S.W. 48.—*T. müllerianus* subsp. n. *primigenius* Trieste p. 36, MÜLLER Boll. Soc. Adriat. 27 2 1913.

*Trichosternus perater*, *simplicipes* p. 22, *setosiceps* spp. n. Australia p. 23, SLOANE Proc. Linn. Soc. N.S.W. 48.

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*Zuphium erebeum* sp. n. Ceylon p. 243, ANDREWES Spolia Zeylanica 12.

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*Protopaussus almorensis* sp. n. India p. 44, CHAMPION Ent. Mo. Mag. 59.

#### HALIPLIDAE.

*Brychius* in Sweden pp. 215-223 (fig.), SELLMAN & LUNDBLAD Ent. Tidskr. 44.

*Haliplus thoracicus* sp. n. Brazil p. 31, ZIMMERMANN Ent. Blätter 19.

*Peltodytes coomani* Tonkin p. 178, *obesus* p. 180, spp. n., PESCHET Bull. Soc. ent. Fr. 1923.

#### DYTISCIDAE.

Physiology and biology of *Dytiscidae* pp. 329-335, BROCHER Ann. Soc. ent. Fr. 91.

*Agabinus sculpturrellus* sp. n. California p. 205, ZIMMERMANN Arch. Natg. 83 A 12 1919.

*Agaporus* gen. n. pp. 147, 192, type *oblongus* Steph., ZIMMERMANN Arch. Natg. 83 A 12 1919.

*Aglymbus instriolatus* sp. n. Brazil p. 37, ZIMMERMANN Ent. Blätter 19.

*Bidessus riveti* sp. n. El Pelado p. 61, PESCHET Bull. Mus. Hist. nat. Paris 1923.—*B. fulvescens* Nicobar Is., Bengal, *quadrilineatus* Bengal p. 34, *pata-gonicus* Patagonia p. 35 spp. n., ZIMMERMANN Ent. Blätter 19.—*B. (Brachyvatus) subgen. n.* p. 134), (*Bidessus*) *alienus* sp. n. Dalmatia and S. Russia, *sauciulus* ab. n. *sexguttatus* p. 140, ZIMMERMANN Arch. Natg. 83 A 12 1919.

*Brachyvatus* subgen. n. see *Bidessus*.

*Canhydrus bruchi* sp. n. Argentina p. 115, *kolbei* nom. n. for *frontalis* Kolbe p. 117, ZIMMERMANN Arch. Natg. 83 A 12 1919.

*Canthyporus* gen. n. pp. 147, 160, ZIMMERMANN Arch. Natg. 83 A 12 1919.—*C. testaceus* p. 35, *similator* p. 36 Cape Colony spp. n., ZIMMERMANN Ent. Blätter 19.

<sup>†</sup>*Colymbetes dolabratus*, new as fossil in Denmark, JESSEN Medd. Geol. 14 pp. 1-18.

*Copelatus vagestriatus*, *neoguineensis* spp. n. New Guinea p. 199, ZIMMERMANN Arch. Natg. 83 A 12 1919.

*Cybister*, notes on spp. p. 244, catalogue p. 268, *gibbosus* p. 244, *kolbei*, *loxioides* p. 245 New Guinea, *guayanensis* Br. Guiana p. 249, *ahlwarthi* Africa p. 258 spp. n., *aubei* nom. n. for *costalis* Aubé p. 246, *owas* subsp. n. *regimbarti* Senegal p. 257, *insignis* subsp. n. *kuntzeni* W. Afrika p. 259, *tripunctatus* subsp. n. *sculpturatus* Ninafou Is. p. 266, WILKE Arch. Naturg. 85 A 2.—*C. explanatus* varr. n. *fusculus* p. 242, *laevicollis* p. 243, ZIMMERMANN Arch. Natg. 83 A 12 1919.

*Deronectes 12-pustulatus* ab. n. *sudowi* p. 182 Germany, SCHOLZ Ent. Blätter 19.

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*Desmopachria punctatissima* Patagonia, *paradoxa* p. 32, *niger* Brazil p. 33 spp. n., ZIMMERMANN Ent. Blätter 19.

*Dytiscus latissimus*, larva p. 159, key to larvæ of spp. p. 161, BLUNCK Zool. Anz. 57.—*D. marginalis* biology, p. 296, BLUNCK Zool. Anz. 57; nervous system pp. 251-280 (figs.), HOLSTE Zs. wiss. Zool. 120; postembryology pp. 171-391 (figs.), BLUNCK Zs. wiss. Zool. 121.—*D. (Macrodytes) pisanus* var. n. *nonsulcatus* p. 233, ZIMMERMANN Arch. Natg. 83 A 12 1919.

*Gaurodytes biguttatus* subsp. n. *winkleri* p. 104, *aequabilis* sp. n. p. 105 Turkestan, GSCHWENDTNER Arch. Natg. Abt. A 89 Heft. 8.—*G. chinensis* sp. n. China p. 211, *bipustulatus* var. n. *maurus* p. 209, *americanus* var. n. *obscurior* p. 212, ZIMMERMANN Arch. Natg. 83 A 12 1919.

*Graptodytes sexguttatus* ab. n. *octoguttatus* p. 183, ZIMMERMANN t.c.

*Herophydrus descarpentriesi* sp. n. Madagascar p. 176, PESCHET Bull. Soc. ent. Fr. 1923.

*Heterosternus* subgen. n. see *Hydroporus*.

*Hydaticus bifasciatus* p. 443, *graueri* p. 444 spp. n. Belgian Congo (figs.), ALWARTH Ergebni. D. Z. Afr. Exped. 1907-1908 5 Lief. 5.—*H. bourringi* abb. n. *nonconjunctus*, *transverseguttatus* p. 227, ZIMMERMANN Arch. Natg. 83 A 12 1919.

*Hydroporus* (*Heterosternus* subg. n. pp. 161, 178), (*H.*) *pseudopubescens* sp. n. S. Russia p. 166, *discretus* ab. n. *woerndlei* p. 174, ZIMMERMANN Arch. Natg. 83 A 12 1919.—*H. macrocephalus* p. 100, *goldschmidti* p. 101 (with var. n. *recidivus* p. 103) spp. n., *pubescens* subsp. n. *transgrediens* p. 109 E. Turkestan, GSCHWENDTNER Arch. Natg. Abt. A. 89 Heft 8.—*H. paganettianus* sp. n. Spain p. 183, SCHOLZ Ent. Blätter 19.

*Hydrovatus maculosus* for *maculatus* Sharp p. 126, *ferrugineus* for *obscurus* Rég., *regimbarti* for *sharpi* Rég., p. 127, nomm. n., ZIMMERMANN Arch. Natg. 83 A 12 1919.

*Hyphydrus coccinelloides* sp. n. Timor p. 33, ZIMMERMANN Ent. Blätter 19.

*Lacconectes bicolor* sp. n. S. India p. 36, ZIMMERMANN Ent. Blätter 19.

*Laccophilus aequatorius* sp. n. Loja p. 62, PESCHET Bull. Mus. Hist. nat. Paris 1923.—*L. ruficollis* sp. n. "Madagascar," muelleri nom. n. for *unifasciatus* Müll., *ceylonicus* nom. n. for *horni* Rég., p. 123, ZIMMERMANN Arch. Natg. 83 A 12 1919.

*Lancetes nordenskjöldi* sp. n. Argentina p. 38, ZIMMERMANN Ent. Blätter 19.

*Macrodytes thianschanicus* sp. n. E. Turkestan p. 107, GSCHWENDTNER Arch. Natg. Abt. A. 89 Heft 8.

*Macrovatellus deplanatus* sp. n. Brazil p. 125, ZIMMERMANN Arch. Natg. 83 A 12 1919.

*Megadytes ecuadorius* sp. n. Ecuador p. 236, ZIMMERMANN t.c.

*Neptosternus coomani* sp. n. Tonkin p. 175, PESCHET Bull. Soc. ent. Fr. 1923.

*Platyneutes nigroangularis* sp. n. Java p. 214, *decempunctatus* ab. n. *flavoscriptus* p. 213, ZIMMERMANN Arch. Natg. 83 A 12 1919.

*Rhantus luederwaldti* sp. n. Brazil p. 37, ZIMMERMANN Ent. Blätter 19.—*R. sexualis* sp. n. N. India p. 219, ZIMMERMAN Arch. Natg. 83 A 12 1919.

*Suphis globiformis* sp. n. Brazil, Paraguay p. 113, ZIMMERMANN t.c.

*Thermonectes marmoratus* ab. n. *latefasciata* p. 230, ZIMMERMANN t.c.

#### GYRINIDAE.

*Gyrinus luederwaldti* sp. n. Brazil p. 39, ZIMMERMANN Ent. Blätter 91.

*Orectochilus africanus* sp. n. Upper Congo p. 170, OCHS Ent. Blätter 19.—*O. corporaali* sp. n. Sumatra p. 293, PESCHET Bull. Soc. ent. Fr. 1922.

*Orectogyrus schubotzi* p. 445, *ruwenzorius* p. 446 spp. n. Belgian Congo (figs.), ALWARTH Ergebni. D. Z. Afr. Exped. 1907-1908 5 Lief 5.

#### HYDROPHILIDAE.

Hydrophilidae of India, d'ORCHY-MONT Mem. Dept. Agr. India 8 pp. 1-12.

Observations on Hydrophilidae, pp. 691-700 (fig.), TAKAHASHI Dobuts. Z. 34 1922.

Key to genera of Sphaeridiinae, p. 71, KNISCH Arch. Naturg. 85 A 8 1920.

†*Ademosyne parva* p. 13, *intermedia* p. 14, *lata* p. 15, *brevis* p. 17, *curvata* p. 18, *ramo-costata* p. 19, *rugulosa* p. 20, *vittamarginata* p. 21, *adunca* p. 23 spp. n., Mesozoic, Queensland (figs.), TILLYARD Publ. Queensl. Geol. Surv. 273.—*A. minor* see *Ademosynoides*, *tumida* see *Platycrossos*.

†*Ademosynoides* gen. n. for *Ademosyne minor* p. 25, *alternata* p. 27, *striatella* p. 28, *abnormis* p. 30, *magnifica* p. 31 spp. n. Mesozoic, Queensland (figs.), TILLYARD t.c.

*Berosus obscurifrons* p. 61, *reticulatus* p. 62 spp. n. S. America, KNISCH Arch. Naturg. 85 A 8 1920.

*Cercillum* gen. n., genotype *Cercyon setuliger* Rég. p. 82, KNISCH t.c.

*Cercyon punctigerum* Ceylon p. 79, *fulvus* p. 80, *vitalisi* p. 81 Malayan Arch. spp. n., KNISCH t.c.—*C. testaceum* sp. n. Florida p. 16, BLATCHLEY Canad. Ent. 55.—*Chaetarthria saundersi* sp. n. Singapore p. 420, d'ORCHY-MONT Treubia 3.

*Coelostoma vitalisi* sp. n. Sumatra p. 418, d'ORCHY-MONT Treubia 3.

*Cyclonotum capense* Muls. see *Dactylosternum hydrophiloides* M'Leay.

*Cycrillum* gen. n., genotype *Megasternum strigicolle* Shp. p. 85, KNISCH Arch. Naturg. 85 A 8 1920.

*Dactylosternum corporaali* p. 416, *proxime* p. 417 spp. n. Sumatra *hydrophiloides* M'Leay (= *Cyclonotum capense* Muls.), d'ORCHY-MONT Treubia 3.—*D. cycloides* p. 73, *inaequale* p. 74, *wagneri* p. 75, *seriatum* p. 76 spp. n. Malayan Arch., KNISCH Arch. Naturg. 85 A 8 1920.—*D. indicum* p. 3, *dachinabadiense* p. 5, *fletcheri*, *coelostomoides* p. 6 spp. n. India, d'ORCHY-MONT Mem. Dept. Agr. India 8.

†*Grammositum* gen. n. *bilineatus* sp. n. Mesozoic, Queensland p. 37 (figs.), TILLYARD Publ. Queensl. Geol. Surv. 273.

*Helochares guatemalensis* sp. n. p. 68, KNISCH Arch. Naturg. 85 A 8 1920.—*H. (s. str.) taprobanicus* Sharp (= *atropiceus* Régimbart) p. 419, d'ORCHY-MONT Treubia 3.

*Helophorus pallidus* var. n. *kirgisicus* Uralsk p. (114), KNISCH Verh. zool.-bot. Ges. Wien 64 1914.

*Hydraena (Haenya) cavernicola* sp. n. S. France p. 14, JEANNEL Bull. Soc. Hist. nat. Toulouse 48 1920.—*H. grourellei* Mexico p. 35, *guadelupensis* Guadeloupe p. 37, *germaini* Bolivia p. 38, *sahlbergi* Brazil p. 40, *vandykei* California p. 42, spp. n. d'ORCHY-MONT Ann. Soc. ent. Belg. 63.

*Hydrochous metallipes* p. 56, *drakei*, *purpureus* p. 57, *pumilio* p. 59 spp. n., key to spp. p. 60, S. America, KNISCH Arch. Naturg. 85 A 8 1920.

*Hydroglobus* gen. n., genotype *Phaeonothrum puncticollis* Bruch p. 78, KNISCH t.c.

*Hydrophilus caraboides* var. n. *flaviventris* p. 46, OCHS Ent. Blätter 19.

*Hydrous mesopotamiae* sp. n. Mesopotamia p. (115), KNISCH Verh. zool.-bot. Ges. Wien 64 1914.

*Laccobius hauserianus* sp. n. Bokhara p. (116), KNISCH t.c.

*Megasternum boletophagum* larva described p. 109 (figs.), PHILLIPS Irish Nat. 32.

*Ochthebius* spp. in salt pans, Tunisia pp. 346–347, GAUTHIER Bull. Soc. Hist. nat. Afr. N. 14.

*Pelthydrus corporaali* sp. n. Sumatra p. 418, D'ORCHYMOND Treubia 3.

*Pigrillum* gen. n., genotype *Cercyon villosum* Rég. p. 84, KNISCH Arch. Naturg. 85 A 8 1920.

†*Platycrossus* gen. n. for *Ademosyne tumida* Till., *ligulatus* p. 33, *subtumidus* p. 34 spp. n., *tumidus* redescribed p. 34 Mesozoic, Queensland (figs.), TILLYARD Publ. Queensl. Geol. Surv. 273.

†*Polysitum* gen. n. *punctatum* p. 40, *minutus* p. 42 spp. n. Mesozoic, Queensland (figs.), TILLYARD t.c.

†*Shepherdia* gen. n. p. 38, *quadri-vittata* sp. n. Mesozoic, Queensland p. 39 (figs.), TILLYARD t.c.

†*Simmondsia* gen. n. p. 35, *sub-piriformis* p. 36, *cylindrica* p. 37 spp. n. Mesozoic, Queensland (figs.), TILLYARD t.c.

*Tropisternus ignoratus* sp. n. Argentina p. 65, KNISCH Arch. Naturg. 85 A 8 1920.

#### STAPHYLINIDAE.

Notes on some Palaearctic Staphylinidae, pp. 176–181, BERNHAUER Ent. Blätter 19.

Synonymic notes on Staphylinidae p. 63, BERNHAUER Wiener Ent. Ztg. 40.

The biology of the Staphylinidae, MANK Ann. Ent. Soc. Amer. 16 pp. 220–237 6 figs.

Australian Staphylinidae, LEA Trans. R. Soc. S. Aust. 47 pp. 1–53 figs.

Staphylinidae, larvae pp. 1–111 (figs.), VÉRHOEFF Arch. Nat. 85 A 6 1920.

Key to Italian Staphylinidae, pp. 16–20, E. G[RIDEILLI] Riv. Coleott. 1923.

Steninae in Johansen's "Danmarks Rovbiller," notes on pp. 217–224, BENICK Ent. Medd. 14.

*Acanthodonia* gen. n., *argentina* sp. n. Argentina p. 184 (figs.), BRUCH Rev. Mus. La Plata 27.

*Actobius kamerunensis* sp. n. Kamerun p. 300, BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.

*Aleochara* (subgen. *Heterochara*), key to palaearctic p. 159, *moczarskii* sp. n. p. 154 (fig.) Austria, SCHEERPELTZ Koleopt. Rdsch. 10.—A. (*Polystoma*) *algarum*, larval adaptation to parasitic life (fig.) pp. 351–358, LESNE & MERCIER Ann. Soc. ent. Fr. 91.—A. *bugnioni*, *nigrocaerulea* spp. n. Antilles p. 389, CAMERON Ann. Mag. N. H. (9) 11.

*Aleuonota carinella* sp. n. St. Vincent p. 368, CAMERON t.c.

*Algon africanus* sp. n. Kamerun p. 308, BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.

*Allocota* subgen. n. see *Zyras*.

*Amelinus* gen. n. p. 307, *gestroi* p. 307, *praenobilis* p. 308 Portuguese Guinea spp. n., BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.

*Anthobium ragusae* sp. n. Korea, Manchuria p. 122, BERNHAUER Koleopt. Rundsch. 10.

*Astenus noctivagus*, *majorinus* p. 18, *mandibularis*, *ambulans* p. 19, *tardus* p. 20 Australia spp. n. (fig.), LEA Trans. R. Soc. S. Aust. 47.

*Astilbus* (subgen. n. *Deroleptus*) *bigladiosus* Borneo p. 150, *plicipennis* p. 151, *luzonicus* Philippines, *montanus* p. 152, *borneensis*, (subgen. n. *Tropignorimus*) *carinithorax* Borneo p. 154 spp. n., BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.—A. *superbus* p. 425, *butuanensis* p. 426, *tuberculatus* p. 427 Philippines spp. n., BERNHAUER t.c. 66 1916.

*Atheta depressicollis* and related species p. 141, *janssoni* Gotska Sandön Is., *glaciei* Spitzbergen p. 142, BERNHAUER Ent. Tidskr. 44.—A. (*Dimetrota*) *hewitti* S. Africa, (*Microdota*) *nigrotestacea* Kamerun p. 319 spp. n., BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.—A. (*Hilara*) *repentina* sp. n. Morocco p. 51, PEYERIMHOFF Bull. Soc. Sci. nat. Maroc 3.—A. *tentativa* p. 369, *antillarum*, *impavida* p. 370, *insularum* p. 371, *cristofera*, *albibennis* p. 372, *accedens*, *dentella* p. 373, *crocicornis* p. 374, *guadalupensis*, *plurispinosa* p. 375, *combusta* p. 376, *fatuosa*, *suboblita*, *subcombusta* p. 377, *jamicensis* p. 378, *flotata*, *stagnicola* p. 379, *reducta*, *cacophila* p. 380, *flavoterminata* p. 381, *anomala* p. 382 spp. n. Antilles, CAMERON Ann. Mag. N. H. (9) 11.—A. (*Philygra*) *luzonica* sp. n. Philippines

p. 431, BERNHAUER Verh. zool.-bot. Ges. Wien 66 1916.—*A. koreana* sp. n. Korea, Manchuria p. 128, BERNHAUER Koleopt. Rundsch. 10.—*A. (Taxicera) zohra* sp. n. Atlas Mts., p. 16, PEYERIMHOFF Bull. Soc. ent. Fr. 1923.

*Belonuchus erichsoni* p. 223, *jalapensis* p. 224, *nigerrimus*, *cariniventris* p. 225 spp. n. Mexico, BERNHAUER Verh. zool.-bot. Ges. Wien 67 1917.

*Blapticoxenus* gen. n. p. 362, *brunneus* sp. n. p. 363 B. Guiana, MANN Zoologica 3.

*Bledius quadricornis* sp. n. India p. 135, BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.

*Bolitobius septemseriatus* sp. n. India p. 46, CHAMPION Ent. Mo. Mag. 59.

*Caccolinus* gen. n. (near *Baptolinus* Kraatz) p. 337 for *endogaeus* sp. n. Roumania figs. p. 341, JEANNEL Bul. Soc. Stiinte Cluj 1.

*Ceratoxenus* gen. n. *tricornis* sp. n., no locality, p. 360 (fig.), MANN Zoologica 3.

*Cisurgus occidentalis* (fig.) sp. n. Morocco p. 53, PEYERIMHOFF Bull. Soc. Sci. nat. Maroc 3.

*Coenonica philippina* sp. n. Philippines p. 424, BERNHAUER Verh. zool.-bot. Ges. Wien 66 1916.—*C. vulnerata* sp. n. Borneo p. 148, BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.

*Compsoglossa* gen. n. nr. *Tachyporus* p. 157, *moultoni* sp. n. Borneo p. 158, BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.

*Conosoma calceatum* sp. n. Atlas Mts. fig. p. 14, PEYERIMHOFF Bull. Soc. ent. Fr. 1923.—*C. discolor* Abyssinia p. 309, *angustum*, p. 310 E. Africa spp. n., BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.—*C. hubrichi* sp. n. Argentina p. 59, BERNHAUER Wiener Ent. Ztg. 40.

*Coproporus hypocyptoides* Borneo p. 148, *convexicollis* S. Africa p. 310, *abessinus* Abyssinia p. 311 spp. n., BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.

*Corotoca guyanae* sp. n. Br. Guiana p. 327, MANN Zoologica 3.

*Corymbogaster* gen. p. 346, *miranda* sp. n. p. 347 (fig.) British Guiana, MANN Zoologica 3.

*Cryptobium bicuspidatum* p. 51, *spissipenne* p. 52, *kershawi*, *nitidicolle* p. 53 Australia spp. n. (fig.), LEA Trans. R. Soc. S. Aust. 47.—*C. flavipenne* sp. n. Kamerun p. 297, BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.—*C. abdominalis* var. n. *philippinum* Philippines p. 420, BERNHAUER op. cit. 66 1916.

*Cyrtothorax caesareus* sp. n. Borneo p. 146, BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.

*Diatrechus congoensis* sp. n. Belgian Congo p. 303, BERNHAUER t.c.

*Dibelonetes palaeotropicus* sp. n. Philippines p. 419, BERNHAUER op. cit. 66 1916.

*Disanellus elegans* sp. n. Borneo p. 145, BERNHAUER op. cit. 65 1915.

*Dolicaon alatus* p. 49, *pedatus* p. 50 Australia spp. n. (fig.), LEA Trans. R. Soc. S. Aust. 47.

*Domene pectinatrix* p. 29, *microps* p. 30 Australia spp. n. (fig.), LEA t.c.

*Dorylotyphlus* gen. n. p. 353, *wasmanni* sp. n. S. Africa p. 354, BERNHAUER Verh. zool.-bot. Ges. Wien 69 1919.

*Eburniola* gen. n. p. 333, *leucogaster* sp. n. p. 334 (fig.) British Guiana and Trinidad, MANN Zoologica 3.

*Echiaster japonicus* sp. n. Japan p. 123, BERNHAUER Koleopt. Rundsch. 10.

*Ecitosymbia* gen. n., *rufa* sp. n. Argentina p. 182 (figs.), BRUCH Rev. Mus. La Plata 27.

*Eucibdelus angusticeps* sp. n. Himalaya p. 186, BERNHAUER Arch. Naturg. 84 A 10.

*Eulissus atlanticus* p. 298, *mokaensis* Fernando Po, *spegazzinii* Senegal p. 299 spp. n., BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.

*Falagria (F.) crucifera* S. Africa, (*Anaulacuspis*) *semipunctata* E. Africa p. 318 spp. n., BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.—*F. cephalotes* sp. n. Grenada p. 364, CAMERON Ann. Mag. N. H. (9) 11.

*Gabrius doderoi* Grid., *tirolensis* Luze, notes on p. 127, GRIDELLI Boll. Soc. ent. ital. 55.

*Gnypeta basiventralis* p. 367 Grenada, *sanctae-luciae, basalis* p. 368 St. Lucia, CAMERON Ann. Mag. N. H. (9) 11.

*Gyrophaena kashmirensis, soror,* spp. n., Kashmir, p. 127, BERNHAUER Koleopt. Rundsch. 10.

*Hesperus borneensis* p. 142, *moultoni* p. 143 Borneo, *gestroi* Fernando Po p. 302 spp. n., BERNHAUER Verh. zool. bot. Ges. Wien 65 1915.

*Heterotaxus* gen. n. p. 313, *bihastatus* sp. n. Madagascar p. 315, BERNHAUER t.c.

*Homalota binodosa* sp. n. Gaboon p. 316, BERNHAUER t.c.

*Hoplandria smithi, heterodon* p. 390, *obliqua*, spp. n., Antilles p. 391, CAMERON Ann. Mag. N. H. (9) 11.

*Hyperomma*, key p. 39, *globuliferum* p. 40, *megacephalum, cylindricum* p. 41, *labrale* p. 42, *cribratum, bryophilum* p. 43, *inquilinum* p. 44, *microps* p. 45, *Australia* spp. n. (figs.), LEA Trans. R. Soc. S. Aust. 47.

*Jurecekia asphaltina* Er. (= *paradoxa* Ramb.) p. 54, RAMBOUSEK Casopis 20.

*Lathrobium* (subgen. n. *Enallagium*) *diabolicum* Borneo p. 139, *methneri, paludicola* E. Africa p. 295 spp. n., BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.—*L. brunnipes* var. n. *laticolle* Bohemia p. 73, MACHULKA Casopis 20.—*L. coecum* systematic position pp. 172–177 (fig.), BOKÓR Ann. Mus. Nat. Hungarici 20.—*L. lottii* sp. n. Elba p. 117, HOLDHAUS Mem. Soc. ent. ital. 2.—*L. orthodoxum* p. 32, *punctipenne, tropicum* p. 33, *angustulum, mediopallidum* p. 34, *pulchellum, transversiceps* p. 35, *abdominale* p. 36, *apiciflavum* p. 37, *Australia* spp. n. (figs.), LEA Trans. R. Soc. S. Aust. 47.

*Lathropinus longicollis* sp. n. Brazil p. 51, BERNHAUER Wiener Ent. Ztg. 40.

*Latona bruchi* sp. n. Argentina p. 57, BERNHAUER Wiener ent. Ztg. 40.

*Leptacinus aethiops* sp. n. Sikkim p. 180, BERNHAUER Arch. Naturg. 84 A 10.—*L. philippinus* Los Banos, *javanus* Java, spp. n., p. 423, BERNHAUER Verh. zool.-bot. Ges. Wien 66 1916.

*Leptusa kamerunensis* sp. n. Kamerun p. 317, BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.—*L. glabriceps* sp. n. Caucasus p. 128, BERNHAUER Koleopt. Rundsch. 10.

*Lispinus hintzi* sp. n. Kamerun p. 287, BERNHAUER Verh. zool.-bot. Ges. Wien 56 1915.—*L. sparsepunctatus* sp. n. Antilles p. 391, CAMERON Ann. Mag. N. H. (9) 11.

*Lithocharis mendacius, obfuscata* spp.n. Antilles p. 399, CAMERON Ann. Mag. N. H. (9) 11.

*Lobochilus* gen. n. p. 179, *javanus* sp. n. Java p. 180, BERNHAUER Arch. Naturg. 87 A 10.

*Macrodiacar* gen. n. p. 45, *potens* sp. n. (fig.) N. S. W. p. 46, LEA Trans. R. Soc. S. Aust. 47.

*Medon conradti* sp. n. Kamerun p. 293, BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.—*M. frater* p. 123 Persia, *abchasicus* p. 124 Caucasus spp. n., BERNHAUER Kol. Rundsch. 10.—*M. insularum* sp. n. Antilles p. 399, CAMERON Ann. Mag. N. H. (9) 11.—*M. planatus* sp. n. Philippines p. 419, BERNHAUER Verh. zool.-bot. Ges. Wien 66 1916.—*M. quadratipennis* p. 23, *lugubris* p. 24, *uniformis* p. 25, *Australia* spp. n. (fig.), LEA Trans. R. Soc. S. Aust. 47.

*Megalops subfasciatus* sp. n. India p. 45, CHAMPION Ent. Mo. Mag. 59.

*Metoponcus superbus* sp. n. Island of Principe p. 298, BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.

*Mycetoporus (Ischnosoma) mandschuricus* p. 125 Manchuria, (*I.*) *bolitobioides* p. 126, *rosti* p. 127 Japan, BERNHAUER Kol. Rundsch. 10.—*M. quadriguttatus* sp. n. India p. 47, CHAMPION Ent. Mo. Mag. 59.

*Neobisnius bakeri* sp. n. Philippines p. 424, BERNHAUER Verh. zool.-bot. Ges. Wien 66 1916.

*Ocyusa granella* sp. n. Antilles p. 387, CAMERON Ann. Mag. N. H. (9) 11.

*Oedichirus puguensis* sp. n. E. Africa p. 289, BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.—*O. cribicollis* (fig.) p. 13, *cribriventer* p. 14 Queensland spp. n. (fig.), LEA Trans. R. Soc. S. Aust. 47.

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*Omaloxenus* gen. n. p. 1, *bequaerti* sp. n. p. 2 Brazil, NOTMAN Amer. Mus. Novit. 68.

*Ontholestes purpuripennis* Celebes, *superbus* Borneo p. 144 spp. n., BERNHAUER Verh. zool. bot. Ges. Wien 65 1915.

*Osorius sikkimensis* sp. n. Sikkim p. 177, BERNHAUER Arch. Naturg. 84 A 10.

*Oxyporus rufus* var. *minarzi* n. n. for *asiaticus* Bernh. p. 122, BERNHAUER Kol. Rundsch. 10.

*Oxytelus amicus* sp. n. Korea p. 122, BERNHAUER Kol. Rundsch. 10.

*Pachycorinus bakeri* sp. n. Philippines p. 421, BERNHAUER Verh. zool.-bot. Ges. Wien 66. 1916.

*Paederus* (subgen. n. *Pseudopae-derus*) *nigerrimus* p. 137, *pallidus* p. 138 India, *cribricollis* (Fauv. i. l.) Gabun p. 289, *pretiosus* Tanganyika, *hintzi* Kamerun p. 290, *ertli* E. Africa, *congoensis* p. 291, *amicus* French Congo, *testaceopiceus* Belgian Congo p. 292 spp. n., BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.—*P. preangeranus* sp. n. Java p. 178, BERNHAUER Arch. Naturg. 84 A 10.—*P. apteromelas*, *stenopterus* p. 15, *wilsoni* p. 16 Australia spp. n. (fig.), LEA Trans. R. Soc. S. Aust. 47.

*Palaminus bivittipennis* sp. n. (fig.) Queensland p. 12, LEA Trans. R. Soc. S. Aust. 47.

*Pammegus kraatzi* sp. n. Kamerun p. 305, BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.

*Perierpon kristensi* sp. n. Abyssinia p. 294, BERNHAUER t.c.

*Perithus tarsatus* p. 336, *wasmanni*, *vestitus* p. 337, British Guiana spp. n., MANN Zoologica 3.

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*Philorhinum florivagum* nom. nov. for *floricola* Champ. (nec Woll.) p. 80, CHAMPION Ent. Mo. Mag. 59.

*Phloeomus densepunctatus* sp. n. Borneo p. 135, BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.

*Phloeoporta producta, occidentalis* spp. n. Antilles p. 388, CAMERON Ann. Mag. N. H. (9) 11.

*Physetops*, key to species p. 120, *spilleri* sp. n. p. 121 Turkestan, BERNHAUER Kol. Rundsch. 10.

*Phytosus fenyesi* sp. n. Senegal p. 315, BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.

*Pinophilus brasiliensis* sp. n. Brazil p. 51, BERNHAUER Wiener Ent. Ztg. 40.—*P. philippinus* Philippines p. 136, *amicus* Borneo, *sondaicus* Java p. 137 spp. n., BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.—*P. major, punctifrons* p. 6, *apterus* N.S.W., *semipacus* p. 7 Queensland spp. n. (figs.), LEA Trans. R. Soc. S. Australia 47.

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*Polyphematiana liliputana* sp. n. Brazil p. 58, BERNHAUER Wiener Ent. Ztg. 40.

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*Proteinus siculus* Sicily p. 43, *longicornis* Italy p. 44, spp. n., DODERO  
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*Pseudognypeta* gen. n. p. 365, *picta*  
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*Pseudothamiaeraea* gen. n. p. 363,  
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 68 1918.

*Scimbalium minutissimum* sp. n.  
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 zool.-bot. Ges. Wien 65 1915.—*S. pallidulum*,  
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 Verh. zool.-bot. Ges. Wien 66 1916.

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 Philippines p. 385, WENDELER D. ent.  
 Zs. 1923.

*Stenagria basiventris* sp. n. Jamaica  
 p. 365, CAMERON Ann. Mag. N.H. (9)  
 11.

*Stenus*, key to palaearctic p. 90,  
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 Blätter 19.—*S. tropicus* sp. n. Kamerun  
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 Ges. Wien 65 1915.—*S. javanus* p. 177,  
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 Ent. Mo. Mag. 59.

*Stilicopsis subdepressa* sp. n. Philip-  
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 bot. Ges. Wien 66 1916.—*S. thoracicus*  
 sp. n. Antilles p. 398, CAMERON Ann.  
 Mag. N. H. (9) 11.

*Stilicus minimus* sp. n. Senegal  
 p. 293, BERNHAUER Verh. zool.-bot.  
 Ges. Wien 65 1915.

*Suniopsis cribripennis* p. 37, *picti-  
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 LEA Trans. R. Soc. S. Aust. 47.

*Sunius sinoseptentrionalis* sp. n. China  
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*Tachinus politus* sp. n. Argentina  
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 40.

*Tachyporus himalayicus* sp. n. Sikkim  
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 65 1915.

*Taenodema* (subgen. n.) *Taenodemiella*) *corumbanum* p. 51, *staudingeri* p. 52, *horni* p. 53, *apicale* p. 54, *duplicopunctatum* Brazil, *bruchi* Bolivia p. 55, *nigrocyanum* Colombia, *semicoeruleum* p. 56, *curticorne* p. 57 Brazil spp. n., BERNHAUER Wiener ent. Ztg. 40.

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*Termitogaster simulans* p. 338, *simpla* p. 341 Br. Guiana, *emersoni*, *brevis* p. 344 Br. Guiana & Trinidad spp. n. (figs.), MANN Zoologica 3.

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*Thamiaraea modesta* sp. n. Philippines p. 430, BERNHAUER Verh. zool.-bot. Ges. Wien 66 1916.

*Thinobius opaculus* p. 396, *ornatus*, *piceus* p. 397 spp. n. Antilles, CAMERON Ann. Mag. N. H. (9) 11.—*T. pulchripennis* sp. n. Argentina p. 49, BERNHAUER Wiener Ent. Ztg. 40.

*Thyreoccephalus sondaicus* Java, *borneensis* Borneo spp. n. p. 140, BERNHAUER Verh. zool.-bot. ges. Wien 65 1915.

*Thyreoxenus* gen. n. p. 329, *parviceps* p. 330 (fig.) Trinidad & Br. Guiana, *pulchellus* p. 332 (fig.), *major* p. 332 Br. Guiana spp. n., MANN Zoologica 3.

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*Trachopeplus* gen. n. p. 353, *setosus* sp. n. p. 354 (fig.) B. Guiana, MANN Zoologica 3.

*Trogaster devillei* sp. n. Elba p. 120 (fig.), HOLDHAUS Mem. Soc. ent. ital. 2.

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*Xenopelta* gen. n. p. 356, *cornuta* sp. n. p. 357 (fig.) B. Guiana, MANN Zoologica 3.

*Zyras quinquespinosus* sp. n. Belgian Congo p. 320, BERNHAUER Verh. zool.-bot. Ges. Wien 65 1915.—*Z. (Allocota subgen. n.) abnormalis* sp. n. Philippines p. 428, BERNHAUER op. cit. 66 1916.—*Z. smithi* p. 382, waterhousei p. 383, *clavata* p. 384, *rhopalomera* p. 385, spp. n., Antilles, CAMERON Ann. Mag. N. H. (9) 11.

#### SILPHIDAE.

Revision of the Necrophorini of the world, with keys, p. 64, PORTEVIN Bull. Mus. Hist. nat. Paris 1923.

*Anemadus asperatus* sp. n. India p. 48, CHAMPION Ent. Mo. Mag. 59.

*Anillochlamys moroderi* sp. n. Spain p. 423, BOLIVAR Y PIELTAIN Bol. Soc. esp. Hist. nat. 23.

*Bathysciola*, key to spp. from S. Alps p. 39, MÜLLER Boll. Soc. Adriat. 27 2 1913.—*B. madoni* sp. n. France p. 104, JEANNEL Bull. Soc. ent. Fr. 1923.—*B. nerusorum* sp. n. Alpes-Maritimes, FAGNIEZ p. 317 Bull. Soc. ent. Fr. 1922.

*Bathysciotes khevenhülleri* subsp. n. *tergestinus*, *crepsensis* Italy p. 33, MÜLLER Atti Acc. ven.-trent. 12-13 1922.

*Bihorites* subgen. n. see *Drimeotus*.

*Breulia cendreroi* sp. n. Spain p. 424, BOLIVAR Y PIELTAIN Bol. Soc. esp. Hist. nat. 23.

*Choleva*, genitalia, p. 1014, distribution and origin in Europe p. 1242, JEANNEL C.R. Acad. Sci. Paris 176.—*C. oblonga* subsp. n. *melenozii* p. 35, *breiti* p. 36, *solarii* p. 38 spp. n. Italy, JEANNEL Boll. Soc. ent. ital. 55.

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*Eusilpha andrewesi* sp. n. China p. 81,  
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*Leptoderus hohenwarti*, observations  
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*L. hohenwarti* ab. n. *bachofeni*  
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Soc. Adriat. Sci. nat. 25 1911.

*Liocolenis portevini* sp. n. India  
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*Liodes atricolor* sp. n. India p. 50,  
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Boll. Soc. Adriat. 27 2 1913.

*Oryotus* key to species, *ravasinii*  
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ven.-trent. 12-13 1922.

*Pholeuon knirschi* subsp. *brevicule*  
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*Pseudocolenis rastrata* sp. n. Kumaon  
p. 52, CHAMPION Ent. Mo. Mag. 59.

*Ptomaphagus benardi* sp. n. Brazil  
p. 380, PORTEVIN Bull. Mus. Hist. nat.  
Paris 1923.

*Royerella tarissani* var. n. *rivularis*  
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ent. Fr. 1923.

*Speocharis sellai* p. 426, *obermaieri*  
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*Speonesiotes bergamascus* Jeann. to  
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Adriat. 27 2 1913.

*Troglecharinus ferreri* subsp. n.  
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ZARIGUEY Treb. Inst. catal. Hist. nat.  
3 1917.

## LEPTINIDAE.

Revision of Leptinidae, OLSUFIEV  
Rev. russe Ent. 18 pp. 81-90.

*Silphopsyllus* gen. n. p. 84, *desmanae*  
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## LIODIDAE.

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*Acrotrichis carpathica* sp. n. Car-  
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*Actidium longicorne* sp. n. Atlas Mts.,  
p. 16, PEYERIMHOFF Bull. Soc. ent. Fr.  
1923.

## SCAPHIDIIDAE.

*Baeocera coomani* sp. n. Tonkin p.  
269, PIC Bull. Soc. zool. Fr. 48.

*Falsoascaphidium* gen. n. for *Scaphi-  
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*Morphoscapha castaneum* sp. n. Tonkin p. 17, PIC Mél. Exot. Ent. 38.

*Pseudobironium tonkineum* sp. n. Tonkin p. 195, PIC Bull. Soc. ent. Fr. 1923.

*Scaphidiolum maculaticeps*, *luteomaculatum*, spp. n., Sumatra p. 194, PIC Bull. Soc. ent. Fr. 1923.—*S. oculare* Madagascar, *notatum* Australia spp. n. p. 16, PIC Mél. Exot. Ent. 38.

*Scaphidium longipenne* Formosa, *jacobsoni* Java spp. n. p. 85, ACHARD Zool. Med. 6 1921.—*S. phungi*, *punctaticolle* spp. n. Tonkin p. 4, PIC Echange 39.—*S. subdepressum* Pic see *Falsoasscaphidium*.

*Scaphosoma annamitum*, *brunneonotatum*, *luteoapicale* spp. n. Tonkin p. 17, PIC Mél. Exot. Ent. 38.—*S. flavapex* Java, *semiglobosum* Formosa spp. n. p. 87, ACHARD Zool. Med. 6 1921.—*S. tricolor* sp. n. Tonkin p. 269, PIC Bull. Soc. zool. Fr. 48.

*Scutoscaphosoma cribipenne* sp. n. Tonkin p. 17, PIC Mél. Exot. Ent. 38.—*S. distinctipenne* sp. n. Tonkin p. 195, PIC Bull. Soc. ent. Fr. 1923.

*Toxidium apicale* Tonkin, *rufum* Sumatra, spp. n. p. 195, PIC Bull. Soc. ent. Fr. 1923.—*T. pygidiale* sp. n. Tonkin p. 18, PIC Mél. Exot. Ent. 38.

#### PSELAPHIDAE.

*Amauronyx paganettii*, sp. n., Crete, p. 1, BLATTNÝ W. & C., N. Beit. system. Insektenk. 1 1916.

*Batrisodes paganettii*, sp. n., Crete, p. 2, BLATTNÝ W. & C., N. Beit. system. Insektenk. 1 1916.

*Berghothiella (Amicrops) mulleriana* sp. n. Albania p. 123 (fig.), RAVASINI Boll. Soc. ent. ital. 55.

*Bythinus paganettii* p. (120), *samniticus* p. (121), *rhinophorus* p. (122) (fig.) spp. n. Italy, BLATTNÝ Verh. zool.-bot. Ges. Wien 64 1914.—*B. nigripennis* var. n. *bohemicus* Bohemia p. 71 (fig.), MACHULKA Bull. Sect. ent. Mus. Nat. Prague 1.

*Collacerothorax spinicollis* sp. n. Australia p. 122, WILSON Proc. R. Soc. Vict. 35.

*Faronus stolzi* sp. n. Italy p. (118) (fig.), BLATTNÝ Verh. zool.-bot. Ges. Wien 64 1914. *H. h. 347.*

*Palimbolus armatipes* p. 125, *robusticornis* p. 126, *pacifica* p. 127, *minor* p. 128 spp. n. Australia, WILSON Proc. R. Soc. Vict. 35.

*Rybaxis strigicephalus* p. 117, *longipilosus* p. 118 (with var. n. *picea* p. 119), *mirabilis* p. 119, *otwayensis* p. 121, *similis* p. 122 spp. n. Australia, WILSON Proc. R. Soc. Vict. 35.

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*Trimium brevicorne* subsp. n. *breiti* Balkans, *lokayi*, *zoufali* subsp. n. *holdhausi* Italy p. 68 (figs.), BLATTNÝ Bull. Sect. ent. Mus. Nat. Prague 1.

#### HISTERIDAE.

Les Exosternini de la faune éthiopienne. Tableaux de détermination et catalogue, DESBORDES Bul. Soc. Stiinte Cluj 1 pp. 365–400.

*Acritus punctum* Aubé var. n. *atlanticus* Casablanca p. 77, CHOBAUT Bull. Soc. Sci. nat. Maroc 3.

*Chlamydopsis* and ants in Victoria p. 152 *pygidialis* var. n. *minor*, *ectatommae* var. n. *rufonaculatus* p. 153, *setipennis* p. 154, *leai* p. 155, *puncticollis* p. 156, *strigicollis* p. 157, *sculptus* p. 158 spp. n., OKE Vict. Nat. 40.—*C. epipleuralis* associated with ants, Australia p. 20 (figs. see p. 53), ZECK Austr. Nat. 4 1918.

*Chronus scaliformis* sp. n. India p. 60, DESBORDES Bull. Soc. ent. Fr. 1923.

*Chrysaelius* gen. n. p. 331, *iheringi* sp. n. p. 332 (fig.) Brazil, REICHENSPERGER Mitt. schweiz. ent. Ges. 13.

*Colonides hubrichi*, sp. n. Argentina, p. 187 (fig.), BRUCH Rev. Mus. La Plata 27.

*Cyclechinus bickhardti* sp. n. Brazil p. 248 (fig.), REICHENSPERGER Zs. wiss. Insektenbiol. 18.

*Ecitonister* gen. n. p. 326, *perversus* sp. n. Brazil p. 327, REICHENSPERGER Mitt. schweiz. ent. Ges. 13.

*Euxenister* gen. n. p. 333, *caroli* sp. n. Brazil p. 335 (fig.), REICHENSPERGER Mitt. schweiz. ent. Ges. 13.—*E. asperatus* sp. n. Brazil p. 249 (fig.), REICHENSPERGER Zs. wiss. Insektenbiol. 18.

*Gnathoncus cerberus* sp. n. Sardinia p. 145, AUZAT Boll. Soc. ent. ital. 55.

*Hister inexpectatus* p. 61, (*Atholus*) *arrowi* p. 62, spp. n. India, DESBORDES Bull. Soc. ent. Fr. 1923.

*Hypocacculus dorsalis* sp. n. Belgian Congo p. 292, DESBORDES Bull. Soc. ent. Fr. 1922.

*Orectoscelis bifovaecollis* sp. n. Victoria p. 159, OKE Vict. Nat. 40.

*Panoplites* nom. n. for *Panoplitellus* Reich. (nec Gould) p. 431, HEDICKE D. ent. Zs. 1923.

*Panoplates* gen. n. resembling *Lissonotus* Lew. p. 321, *comes* sp. n. (fig.) Brazil p. 322, REICHENSPERGER Mitt. schweiz. ent. Ges. 13.—See *Panoplites*.

*Paracritus* gen. n. near *Acritus* p. 41, *australis* sp. n. Chile p. 42, BRETHES Rev. chil. Hist. nat. 27.

*Paratropinus* gen. n. near *Paratropus* Gerst. p. 317, *variegatus* sp. n. Brazil p. 318 (fig.), REICHENSPERGER Mitt. schweiz. ent. Ges. 13.

*Parodites* gen. n. near *Synodites* p. 246, *wasmanni* sp. n. Brazil p. 247 (fig.), REICHENSPERGER Zs. wiss. Insektenbiol. 18.

*Paroecister* gen. n. near *Chelonosternus* Bickh. p. 314, *zikáni* sp. n. Brazil p. 316 (fig.), REICHENSPERGER Mitt. schweiz. ent. Ges. 13.

*Platysoma (Platylistes) sulcipectus* sp. n. Borneo p. 11, DESBORDES Bull. Soc. ent. Fr. 1923.

*Reninus* key to species p. 370, *wagneri* p. 368, *distinguendus* p. 369 spp. n. Argentina, DESBORDES Bull. Mus. Hist. nat. Paris 1923.

*Saprinus amazonius* sp. n. Brazil p. 151, DESBORDES Bull. Soc. ent. Fr. 1923.—*S. concinnus*, identity p. 235—243, *jacobsoni* sp. n. Turcomania p. 243, REICHARDT Ent. Mitt. 12.

*Sternocoelopsis* gen. n. p. 328, *veselyi* sp. n. Brazil p. 330, REICHENSPERGER

Mitt. schweiz. ent. Ges. 13.—*S. auri-comus* sp. n. Brazil p. 250 (fig.), REICHENSPERGER Zs. wiss. Insektenbiol. 18.

*Syphilister* gen. n. near *Teratosoma* Lew. p. 323, *collegianus* sp. n. Brazil p. 325 (fig.), REICHENSPERGER Mitt. schweiz. ent. Ges. 13.

*Synodites setulosus* p. 243 (fig.), *nitidus* p. 244 (fig.), *striatus* p. 245 Brazil spp. n., REICHENSPERGER Zs. wiss. Insektenbiol. 18.—*S. major* p. 289, *ecitonis* p. 190, *ciliatus* p. 192, spp. n. (figs.) Argentina, BRUCH Rev. Mus. La Plata 27.

*Thaumataerius* gen. n. p. 364, *emersoni* sp. n. p. 365 (fig.) B. Guiana, MANN Zoologica 3.

*Xylostega* gen. n. near *Colonides* Schmidt, *collegii* sp. n. p. 319 (fig.) Brazil, REICHENSPERGER Mitt. schweiz. ent. Ges. 13.—*X. quadriglumis* sp. n. Brazil p. 251 (fig.), REICHENSPERGER. Zs. wiss. Insektenbiol. 18.

#### HELOTIDAE.

*Helota ritsemana* sp. n. China p. 68, HELLER Ent. Blätter 19.

#### SCYDMAENIDAE.

*Cephennium romanum* sp. n. Italy p. (123) (fig.), BLATTNÝ Verh. zool.-bot. Ges. Wien 64 1914.

*Euconnus holdhausi* sp. n. Italy p. 251, STOLZ Verh. zool.-bot. Ges. Wien 65 1915.—*E. miles* sp. n. Elba p. 125 (fig.), HOLDHAUS Mem. Soc. ent. ital. 2.

*Napochus pragensis* sp. n. Bohemia p. 70, MACHULKA Bull. Sect. ent. Mus. Nat. Prague 1.

*Stenichnus hummeli* p. 4, *creticus* p. 5, *basimpressus* p. 6 spp. n. Crete, BLATTNÝ W. & C., N. Beit. system. Insektenk. 1 1916.

*Tetramelus manlii* sp. n. Albania p. 125, RAVASINI Boll. Soc. ent. ital. 55.

#### NITIDULIDAE.

*Amphicrossus subvittatus* sp. n. China p. 68, HELLER Ent. Blätter 19.

*Axyra gigas* sp. n. Congo p. 109, GROUVELLE Ges. Luxemb. Natf. Fest-schrift 1915.

*Brachypeplus latimargo* Zambesi p. 105,  
*tachinoides* Congo p. 105 spp. n.,  
 GROUVELLE Ges. Luxemb. Natf. Festschrift 1915.

*Cryptaracha signaticollis* p. 113, *nigroscripta* p. 115 spp. n. Congo, GROUVELLE  
 Ges. Luxemb. Natf. Festschrift 1915.

*Cybocephalus aeneonitens* sp. n. Ku-  
 maon p. 77, CHAMPION Ent. Mo. Mag.  
 59.

*Glischrochilus olivieri* var. n. *puncticollis*, *quatuorpustulatus* ab. n. *turnicus*  
 Poland p. 112, TRELLA Polskie Pismo Ent. 2.

*Lasiodactylus coccinelloides* p. 110,  
*dorsalis* p. 112 spp. n. Congo, GROU-  
 VELLE Ges. Luxemb. Natf. Festschrift  
 1915.

*Megauchenia sandacana* p. 40 Borneo,  
*seriegranulata* p. 41, *alternans* p. 42  
 Philippines spp. n., HELLER Ent.  
 Blätter 19.

*Microporum congolense* sp. n. Congo  
 p. 107, GROUVELLE Ges. Luxemb. Natf.  
 Festschrift 1915.

*Neopocadius nitiduloides* anatomy  
 p. 84 (fig.), BRUCH Physis 7.

*Rhizophagus depressus* ab. n. *umbratus*  
 Poland p. 112, TRELLA Polskie Pismo Ent. 2.

*Soronia conicicollis* sp. n. Czechoslovakia p. 181, ROUBAL Bull. Soc. ent. Fr. 1923.—*S. maxima* sp. n. China p. 67,  
 HELLER Ent. Blätter 19.

#### TROGOSITIDAE (TEMNOCHILIDAE).

*Alindria lujai* p. 116, *ferranti* p. 117,  
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 GROUVELLE Ges. Luxemb. Natf. Festschrift  
 1915.—*A. montana* p. 246,  
*amabilis* p. 247, spp. n., E. Africa,  
 GROUVELLE Voy. Alluaud et Jeannel Afrique Or. xvii Clavicornes 1923.

*Ancyronea jeanneli* sp. n. E. Africa  
 p. 251, GROUVELLE t.c.

*Gymnochila alluaudi* sp. n. E. Africa  
 p. 248, GROUVELLE t.c.

#### COLYDIIDAE.

*Aglenus brunneus* var. n. *longior*  
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*Bothrideres filum* sp. n. Congo p. 119,  
 GROUVELLE Ges. Luxemb. Natf. Fest-  
 schrift 1915.

*Deretaphrus bucculentus* sp. n. (fig.)  
 S. Australia p. 212, ELSTON Trans. R.  
 Soc. S. Aust. 47.

*Mimocossyphus* gen. n. (near *Cossy-  
 phodes* Westw.) *minor* sp. n. Egypt p. 5,  
 PIC Échange 39.

#### PASSANDRIDAE.

*Catogenus dejeani* sp. n. Congo p. 121,  
 GROUVELLE Ges. Luxemb. Natf. Fest-  
 schrift 1915.

*Laemotnetus niger* sp. n. E. Africa  
 p. 253, GROUVELLE Voy. Alluaud et  
 Jeannel Afrique Or. xvii Clavicornes  
 1923.

#### CUCUJIDAE.

Taxonomy of Cucujidae, with keys to  
 subfamilies, p. 198, BÖVING Zoologica  
 3.

The distribution of the Cucujidae,  
 KESSEL Phil. J. Sci. 22 pp. 91–99.

Notes on the habits of the Cucujidae,  
 WHEELER Zoologica New York 3 1921  
 pp. 173–183.

*Coccidotrophus* gen. n. p. 189,  
*socialis* sp. n. Br. Guiana p. 190,  
 SCHWARZ & BARBER Zoologica 3 1921;  
 biology (figs.), WHEELER t.c. p. 51;  
 early stages (figs.), BÖVING t.c. p. 203.

*Cucujus cinnaberinus* ab. n. *lechicus*  
 Poland p. 113, TRELLA Polskie Pismo  
 Ent. 2.

*Eunausibius wheeleri* sp. n. Br. Guiana  
 p. 192 (figs.), SCHWARZ & BARBER  
 Zoologica 3 1921; biology (figs.),  
 WHEELER t.c. p. 88; early stages (figs.),  
 BÖVING t.c. p. 203.

*Hemipeplus alluaudi* sp. n. E. Africa  
 p. 270, GROUVELLE Voy. Alluaud et  
 Jeannel Afrique Or. xvii Clavicornes  
 1923.

*Laemophloeus picinus* p. 256, *livens*  
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*Monotoma angusticollis* var. n. *sulci-  
 collis* Poland p. 112, TRELLA Polskie  
 Pismo Ent. 2.

*Pediacus montivagus* sp. n. Kumaon  
 p. 78, CHAMPION Ent. Mo. Mag. 59.

Silvanidae fam. n. for *Silvanus* etc. p. 198, key to genera p. 202, BÖVING *Zoologica* 3 1921.

*Silvanus apicalis* sp. n. E. Africa p. 266, GROUVELLE Voy. Alluaud et Jeannel Afrique Or. xvii Clavicernes 1923.

#### CRYPTOPHAGIDAE.

Catalogue of Cryptophagidae, SCHENKLING Col. Cat. Junk & Schencking pt. 76 92 pp.

*Cryptophagus insulicola* Kephalonia p. 36, *trebinjensis* Herzegovina p. 37, spp. n., ROUBAL Arch. Natg. 83 A 7 1919.

*Leucohimiatiops* gen. n. *javanus* sp. n. Java p. 275, HELLER Treubia 3.

*Micrambe* key p. 206, FALCOZ Bull. Soc. ent. Fr. 1923.

#### EROTYLIDAE.

Erotylidae of Indo-Australian region, particularly of Philippines, keys, records, synonymy pp. 1-121, HELLER Arch. Naturg. 84 A 8 1920.

*Aegithus clathratus* Amazons p. 79, *boliviensis* Bolivia, *pictus* Panama p. 80, spp. n., SCHENKLING Arch. Natg. 83 A 11 1919.

*Aulacochilus cribicollis* Banguey I., *angolensis* Angola, *australis* Australia, spp. n., p. 78, SCHENKLING Arch. Natg. 83 A 11 1919.—*A. lunifer* var. n. *punctatellus* Tonkin, *djampeanus* Tana-jampea Is. p. 4, *astrolabicus* N. Guinea p. 5, *anamensis* Annam p. 6, *femoralis*, *chrysomelinus* Borneo p. 7, spp. n., HELLER Arch. Naturg. 84 A 8 1920.—*A. rufovittatus* sp. n. Mindanao p. 4, HELLER Stettin. ent. Zg. 84.

*Brachysphaenus (Saccomorphus) intercedens* Peru, *mundus* Bolivia, spp. n., p. 82, SCHENKLING Arch. Natg. 83 A 11 1919.

*Campotritoma* gen. n. p. 28, *fulva* (genotype), *hubenthali*, spp. n., Luzon p. 46 (fig.), HELLER Arch. Naturg. 84 A 8 1920.

*Coptengis clipealis* p. 64, *gracilior* p. 65, spp. n., (figs.) New Guinea, HELLER t.c.

*Cosmoscaphula* subgen. n. see *Episcaphula*.

*Cyrtomorphoides* gen. n. p. 27, *albicornis* sp. n. Luzon p. 31 (fig.), HELLER t.c.

*Cyrtotriplax* see *Ortitma*.

*Diphyllus euphorbiae* sp. n. Morocco p. 51, PEYERIMHOFF Bull. Soc. Sci. nat. Maroc 3.

*Encaustes anthracina* sp. n. N. Guinea p. 11, HELLER Arch. Naturg. 84 A 8 1920.—*E. suturalis* N. Borneo, *montana* Tonkin, spp. n., p. 83, *humeralis* ab. n. *unicolor* p. 84, SCHENKLING Arch. Natg. 83 A 11 1919.

*Episcapha* key to spp. of subgen. *Episcapha* s. str. p. 73, *quadrimaculata* subsp. n. *septentrionalis* Formosa p. 68, *confusa* Celebes, *latiuscula* Mindanao p. 69, *macrocera* Sumatra p. 70, *amuntai* Borneo p. 71, *maculifrons* Bali p. 72, *estriata* Banguey Is. p. 73, spp. n., *Piloscapha* subgen. n. p. 55 (type *glabra* Wied.), *glabra* var. n. *intermixta* Java, subsp. n. *sumatrana* Sumatra p. 76, *hypocrita* Java p. 77, *leviuscula* Celebes p. 78, *opaca* Yunnan p. 79, *mausonica* Tonkin p. 80, spp. n. (figs.), HELLER Arch. Naturg. 84 A 8 1920.

*Episcaphula*, *Isoscapha* subgen. n. type *amboinensis* Cr. p. 56, *tonkinensis* Tonkin, *fratria* Burma p. 83, *abbreviata* Luzon p. 84, *exigua* Borneo p. 85, *rubrifrons* Banguey I. p. 87, *biimpressicollis* Sumbawa, *arcana* New Guinea p. 88, *gracilis* Sumatra p. 89, *Tropidoscaphula* subgen. n. type *corallipes* Cr. p. 56, *stremanni* Ceram p. 90, *Episcaphula* s. str. type *amboinensis* Cr. p. 56, *novae-guineae* p. 91, *vagepunctata* p. 92, *chalybaeicollis* p. 94, *tripocelia* p. 98, *coviae* p. 100, *arfakiana* p. 101 New Guinea, *munda* Cebu Is. p. 94, *humeralis* Celebes p. 95, *uniramosa* Java p. 96, *mediofasciata* p. 102, *gazellae* p. 103 New Pomerania, *insignis* Moluccas p. 104, *Cosmoscaphula* subgen. n. *tamburenea* p. 105, *clathrata* p. 106 Queensland, *Oretylus* subg. n. type *hislopi* Cr. p. 56, *punctatissima* p. 106, *carinicollis* p. 107 Luzon, subg. *Lanugodacne* Hell. p. 57, *manilae* Luzon p. 108, *pubescens* S. India p. 110, spp. n., *australis* subsp. n. *confusa* Dammer I., *rufomarginata* New Guinea p. 98 (figs.), HELLER Arch. Naturg. 84 A 8 1920.

*Henoticus californicus* biology, synonymy and distribution p. 167 (figs.), FALCOZ Ann. Soc. linn. Lyon **69**.

*Isoscapula* subgen. n. see *Episcaphula*.

*Libyodacne* gen. n. (? subgen. n. of *Megalodacne*), genotype *grandipennis* Fairm. p. 57, HELLER Arch. Naturg. **84** A 8 1920.

*Libatomorpha* gen. n. p. 28, *serrulatipes* sp. n. Luzon p. 32 (figs.), HELLER t.c.

*Macrodacne* gen. n. (? subgen. n. of *Megalodacne*) genotype *luteoguttata* Cr. pp. 57, 115, *fraudulenta* sp. n. Malacca p. 116 (fig.), HELLER t.c.

*Megalodacne cunctans* p. 90, *marginalis* p. 91, *regina* p. 92, *ertli* p. 93, spp. n., Africa, *audouini* ab. n. *unifasciata* Mexico p. 93, SCHENKLING Arch. Naturg. **83** A 11 1919.

*Megischyrus pictipennis* Venezuela p. 84, *laetus* Peru p. 85, spp. n., *nicaraguae* var. n. *panamae* p. 85, *zonalis* ab. n. *immarginata* p. 86, SCHENKLING t.c.

*Metallencaustes* gen. n. p. 11, *chalybaea* (genotype) Tonkin p. 24, *aenea* Borneo, Sumatra p. 25, spp. n., HELLER Arch. Naturg. **84** A 8 1920.

*Micrencaustes*, *Mimencaustes* subgen. n. type *dehaani* Cast. p. 10, *lunulata* var. n. *rufipes* p. 12, ab. n. *picta* p. 13 Java; *cruentata* New Guinea p. 13, *cyclops* Sumatra p. 14, *megalodacnoides* Tonkin p. 17, *episcaphoides* p. 18, *schröderi* p. 20 Luzon, *kraepelini* Java p. 21, *dajaca* Borneo p. 22, *wunderlichi* Java, Sumatra p. 23 (with subsp. n. *tonkinensis* Tonkin p. 24), spp. n., *gigas* subsp. n. *novae-guineae* N. Guinea, *batjana* Batjan p. 17, *torquatithorax* Batjan p. 17, *torquata* subsp. n. *borneensis* Borneo p. 21 (figs.), HELLER Arch. Naturg. **84** A 8 1920.—*M. brevior* sp. n. Luzon p. 4, HELLER Stettin ent. Zg. **84**.—*M. lunulata* ab. n. *picta* p. 84, SCHENKLING Arch. Naturg. **83** A 11 1919.

*Microsternus puncticollis* Annam, *queenslandicus* Queensland, spp. n., p. 113 (figs.), HELLER Arch. Naturg. **84** A 8 1920.

*Mimencaustes* subg. n. see *Micrencaustes*.

*Neotrioma* gen. n. p. 28, *monticola* sp. n. Sumatra p. 45 (fig.), HELLER Arch. Naturg. **84** A 8 1920.—*N. javana* sp. n. Java p. 273, ARROW Treubia **3**.

*Nesitis rufipes* sp. n. Borneo p. 88, SCHENKLING Arch. Naturg. **83** A 11 1919.—*N. celebesica* sp. n. Celebes p. 66, HELLER Arch. Naturg. **84** A 8 1920.

*Ogcotriplax* subgen. n. see *Triplax*.

*Oretylus* subgen. n. see *Episcaphula*.

*Ortitma* nom. n. for *Cyrtotriplax* p. 27, HELLER Arch. Naturg. **84** A 8 1920.

*Palaeolybas andreae* abb. n. *simplex*, *fasciata*, *sexsignata*, *binotata*, p. 87 SCHENKLING Arch. Naturg. **83** A 11 1919.

*Paracoptengis* gen. n., *lineola* Crotch genotype p. 54, HELLER Arch. Naturg. **84** A 8 1920.

*Platydacne ruficornis*, *quadriplagiata* p. 89, *robusta* p. 90, spp. n., Africa, SCHENKLING Arch. Naturg. **83** A 11 1919.

*Psephodacne* gen. n. (? subgen. n. of *Megalodacne*), genotype *quadriguttata* Ol. p. 57, HELLER Arch. Naturg. **84** A 8 1920.

*Pseudotriplax* subgen. n. see *Triplax*.

*Piloscapha* subgen. n. see *Episcapha*.

*Rhopalotritoma* gen. n. p. 27, *amabilis* sp. n. Luzon p. 41 (figs.), HELLER Arch. Naturg. **84** A 8 1920.

*Simocoptengis* gen. n. p. 57, *stigmosa* sp. n. New Guinea p. 81, HELLER t.c.

*Subana* gen. n. p. 54, *vulnerata* sp. n. Mindanao p. 63, HELLER t.c.

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*Thallis* key to spp. p. 59, *subviolacea* Borneo p. 60, *papuana* Solomon Is., *samoensis* Samoa p. 61, spp. n., HELLER Arch. Naturg. **84** A 8 1920.—*T. atricornis* sp. n. Queensland p. 129, WILSON Proc. R. Soc. Vict. **35**.

*Titorma* gen. n. p. 27, *coccinella* sp. n. Luzon p. 33 (fig.), HELLER Arch. Naturg. **84** A 8 1920.

*Trimota* gen. n. p. 27, *apicalis* sp. n. Luzon p. 42, HELLER t.c.

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Arch. Naturg. 84 A 8 1920.—*T. imugina*  
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Zg. 84.—*T. nigripes* sp. n. China p. 69,  
HELLER Ent. Blätter 19.

*Tritomophasma* gen. n. p. 27, *sumatrensis* sp. n. Sumatra p. 43 (figs.),  
HELLER Arch. Naturg. 84 A 8 1920.

*Tropidoscaphula* subgen. n. see *Episcaphula*.

*Xenotritoma* gen. n. p. 272, *cingulata*  
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*Amphisternus sexplagiatus* sp. n.  
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*Beccaria suturalis* Mindanao p. 6,  
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*Dapsa denticollis* ab. n. *binotata*  
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*Saula elongata* sp. n. Luzon, p. 7  
HELLER Stettin ent. Zg. 84.

#### COCCINELLIDAE.

Synonymy of Chilean Coccinellidae  
pp. 453–456, BRÈTHES Rev. chil. Hist.  
nat. 25.

Hibernation of Coccinellidae p. 53,  
HAWKES Ent. Mo. Mag. 59.

Variability in Coccinellidae, REINECK  
Arch. Natg. 83 A 6 pp. 7–11 86 figs.  
1919.

Coccinellidae of Queensland 150 pp.,  
WEISE Ark. Zool. 15 No. 12.

*Amida tricolor* var. n. *formosana*  
Formosa p. 185, WEISE Arch. Natg. 89  
A 2.

*Calvia duplicitipuncta* sp. n. Turkestan  
p. 101, SEMENOV-TIAN-SHANSKI &  
DOBRZHANSKI Rev. russe Ent. 18.

*Cisseis* Muls. see *Menevillidia* n. n.

*Coccinella 5-punctata* var. n. 11-punctata  
Siberia, Mongolia, p. 241,  
MUNSTER Norsk. Ent. Tidsskr. 1.—*C.*  
10-punctata, bibliography of papers on  
variability p. 101, SCHUMACHER Arch.  
Naturg. 84 A 12 1920; variation, pp.  
43–49, 109 figs., REINECK Arch. Natg.  
83 A 1 1919.—*C. 11-punctata* ab. n.  
*lemani* England p. 67, MARRINER Ent.  
Rec. 35 1923.—*C. connexa* Germ. see  
*Eriopis 16-pustulata* Latr.

*Coelophora insularis* sp. n. Formosa  
p. 184, WEISE Arch. Natg. 89 A 2.

*Cranoryssus* gen. n. for Chilean species  
of *Oryssomus* p. 455 (fig.), BRÈTHES  
Rev. chil. Hist. nat. 25.

*Curinus ruizi* sp. n. Chile p. 40 (fig.),  
BRÈTHES Rev. chil. Hist. nat. 27.

*Dichaina* gen. n. near *Sticholotis* p.  
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*Diomus hypocritus* sp. n. Queensland  
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*Epilachna mjobergi* sp. n. p. 131  
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*Eriopis connexa*, Germ. (= *sexdecim-*  
*pustulata* Latr.) p. 228, BRÈTHES Bull.  
Soc. ent. Fr. 1923 & p. 42 Rev. chil.  
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BRÈTHES Bull. Soc. ent. Fr. 1923.

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WEISE Arch. Natg. 89 A 2. [See  
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*Orcus evelynensis*, *clypeatus* spp. n  
Queensland p. 133, WEISE Ark. Zool  
15 no. 12.

*Ortalia femorata* sp. n. E. Africa p.  
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*Scymnus, Parasidis* subgen. n. p. 87 (fig.), BRÈTHES Rev. chil. Hist. nat. 19 1915.—*S. nubes*, biology, pp. 155–163, DAVIDSON Trans. Amer. Ent. Soc. 49.—*S. (Nephus) peyerimhoffi* sp. n. Algeria & Tunisia p. 79, ab. n. *disjunctus* Tunisia p. 80, SICARD Bull. Soc. Hist. nat. Afr. Nord. 14.—*S. (Diomus) xantholeucus* sp. n. Br. Guiana p. 193, SCHWARZ & BARBER Zoologica 3 1921. [See *Nephus*.]

*Semiadalia turkestanica* sp. n. Turkestan p. 101, SEMENOV-TIAN-SHANSKI & DOBRZHANSKI Rev. russe Ent. 18.

*Serangeum corale* sp. n. Queensland p. 137, WEISE Ark. Zool. 15 no. 12.

*Solanophila aulisoides, morbida* spp. n. E. Africa p. 206, WEISE Arch. Natg. 83 A 4 1919.—*S. alternans, sauteri* p. 182, *decemguttata, formosana* p. 183 spp. n. Formosa, WEISE Arch. Natg. 89 A 2.

*Spiladelpha* gen. n. *barovskii* sp. n. Siberia p. 99, SEMENOV-TIAN-SHANSKI & DOBRZHANSKI Rev. russe Ent. 18.

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Telephoridae (Cantharidae) of the W. Indies, revision with keys, pp. 485–499 (figs.), LENG & MUTHLER Bull. Amer. Mus. Nat. Hist. 46 1922.

Notes on larvae of Telephoridae p. 110 (figs.), VERHOEFF Arch. Natg. 89 A 1.

*Belotus minutus, antillarum* p. 486, *pallidiventris* p. 488 spp. n. W. Indies (figs.), LENG & MUTHLER Bull. Amer. Mus. Nat. Hist. 46 1922.—*B. cacumenum* p. 7, *balloui* p. 8 spp. n. Cuba, MUTHLER Amer. Mus. Novit. 63.

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*Polemius hispaniolae* sp. n. Dominica p. 493 (fig.), LENG & MUTCHEL Bull. Amer. Mus. Nat. Hist. 46 1922.

*Pygidia distinguenda* var. n. *saasensis* Switzerland p. 9, PIC Échange 39.

*Phagonycha elongata* var. n. *gallica* France p. 1, PIC t.c.

*Silidiscodon rufiventris* sp. n. Dominica p. 493 (fig.), LENG & MUTCHEL Bull. Amer. Mus. Nat. Hist. 46 1922.

*Silidius alberti* sp. n. Belgian Congo p. 63, PIC Bull. Soc. ent. Fr. 1923.—*S. denominandus* n.n. for *tanganikanus* PIC 1922 (nec 1921), *testaceolimbatus* n.n. for *testaceocinctus* PIC 1921 (nec 1919), *mutatus* n.n. for *notaticeps* PIC 1922 (nec 1903), PIC Mél. Exot. Ent. 38.—*S. abyssinicus* var. n. *maracanurus* Abyssinia p. 7, PIC Échange 39.

*Silis grenadensis* sp. n. Grenada p. 491 (fig.), LENG & MUTCHEL Bull. Amer. Mus. Nat. Hist. 46 1922.

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#### LAMPYRIDAE.

Lampyridae of the W. Indies, revision with keys, pp. 431–485 (figs.), LENG & MUTCHEL Bull. Amer. Mus. Nat. Hist. 46 1922.

*Alecton flavum* sp. n. Cuba p. 434 (fig.), LENG & MUTCHEL Bull. Amer. Mus. Nat. Hist. 46 1922.

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*Lampyris spinifer* sp. n. Egypt p. 9, PIC Échange 39.

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*Luciola ibukiyamana*, notes on, pp. 256–260, NAWA Konchu Sekai 25 1921.—*L. stanleyi* sp. n. Congo p. 73, OLIVIER Bull. Soc. Nat. Luxembourg 23 1913.

*Phaenolis abditus* female and larva (fig.) Ecuador p. 193, BARBER Ins. Insc. Mens. 11.

*Photinus*, key to species p. 456, *heterodoxus* p. 457, *ceratus* p. 459, *lutzi*, *dubiosus* p. 461, *cubanus* p. 463, *manni* p. 466, *singularis* p. 467 spp. n. W. Indies (figs.), LENG & MUTCHEL Bull. Amer. Mus. Nat. Hist. 46 1922.—*P. lengi* p. 2 (fig.), *magnus* p. 3 (with var. n. *turquino*), *unicus* p. 4, *sublateralis* p. 6 spp. n. W. Indies, MUTCHEL Amer. Mus. Novit. 63.

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*Pyrocalia ferranti* sp. n. Sumatra p. 72, OLIVIER Bull. Soc. Nat. Luxembourg 23 1913.

*Zarrhipis*, key to species p. 111, *truncaticeps* p. 109, *amicetus*, *brevicollis*, p. 110, *alamedae* pp. 110, 184, spp. n. California, FALL Canad. Ent. 55.

## LYCIDAE.

*Lycidae*, of the W. Indies, revision, with keys, pp. 416-431 (figs.), LENG & MUTHLER Bull. Amer. Mus. Nat. Hist. 46 1922.

*Bulenides purpureus* sp. n. Formosa p. 74, PIC Ann. Soc. linn. Lyon 69.

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*Lycostomus testaceipes*, *binotatus*, *singularicollis*, Mexico, *maroniensis*, *bilineatus* p. 34, *goyasensis*, *mediorufus* p. 35 spp. n. S. America, PIC hors-texte Échange 39.

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Bull. Amer. Mus. Nat. Hist. 46 1922.

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#### ELATERIDAE.

The status of the Coleopterous family Plastoceridae, HYSLOP Proc. Ent. Soc. Washington 25 pp. 157–160 1 pl.—Id., J. Wash. Acad. Sci. 13 p. 375.

*Athous* revision, keys, catalogue of Eastern Adriatic spp. pp. 97–143, MÜLLER Boll. Soc. Adriat. 26 2 1912.—*A. mokrzeckii* sp. n. Bulgaria p. 53, LOMNICKI Polskie Pismo Ent. 2.

*Cardiophorus bipunctatus* var. n. *alcalanus*, *signatus* var. n. *moreli* Spain, *versicolor* var. n. *gallicus* Hyères p. 10, PIC Échange 39.

*Cardiorhinus granulosus* Sol. not a synonym of *Ludius decorus* Germ. p. 457, BRÈTHES Rev. chil. Hist. nat. 25.

*Corymbites cupreus* var. n. *reductus* Andora p. 10, PIC Échange 39.—*C. cupreus* subsp. *aeruginosus* biology in Finland, SAALAS Ann. Soc. zool.-bot. Fenniae Vanamo 2.

*Diadochus* see *Odontoderus*.

*Diploconus mirabilis* Tonkin p. 12, *pulchellus* Yunnan p. 13 spp. n., FLEUTIAUX Bull. Soc. ent. Fr. 1923.

†*Elaterites subulatus* p. 44, *transversus* p. 45 spp. n. Mesozoic Queensland (figs.), TILLYARD Publ. Queensl. Geol. Surv. 273.

†*Elaterium punctomarginum* p. 46, *bipunctatum* p. 47 spp. n. Mesozoic Queensland (figs.), TILLYARD Publ. Queensl. Geol. Surv. 273.

*Odontoderus* Schwarz (= *Diadochus* Buyss.) pp. 106–107, MÜLLER Wiener ent. Ztg. 40.

*Parelater coccineus* larva p. 127 (figs.), DOVER & SRINIVASA RAO Ent. Mo. Mag. 59.

*Prosternon tessellatum*, biological note, pp. 172–180, BAUDRIMONT Proc. verb. Soc. linn. Bordeaux 72 1920.

#### EUCNEMIDAE (MELASIDAE).

Synonymy of Melasidae pp. 369–374, MEQUIGNON Ann. Soc. ent. Fr. 91.

Melasidae of Canada, BEAULIEU Nat. Canad. 48, 49.

Keys to subfamilies and genera of Japanese Melasidae p. 292, FLEUTIAUX Ann. Soc. ent. Fr. 91.

*Arhagus carinicollis* sp. n. Japan p. 307, FLEUTIAUX t.c.

*Balistica elongata* sp. n. Japan p. 314, FLEUTIAUX t.c.

*Bioxylus* gen. n. key to species p. 320, *galloisi* sp. n. Japan p. 321, FLEUTIAUX t.c.

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*Sandalus cribicollis* sp. n. California p. 37, VANDYKE Bull. Ent. Soc. Brooklyn 18.—*S. insulatus* sp. n. Fr. Guiana p. 13, PIC Mél. Exot. Ent. 39.

#### BUPRESTIDAE.

Biological notes on Brazilian Buprestidae p. 1267 (figs.), BONDAR Rev. Mus. Paul. 13.

Palaeartic Buprestidae, OBENBERGER Casopis 20 pp. 15–29.

Buprestidae, explanation of Tables I–III in Arch. Natg. Abt. A 1922 Heft 12, OBENBERGER Arch. Natg. Berlin 89 A 7 1923 p. 173.

Some South American Trachydinae pp. 114–125, OBENBERGER Ent. Blätter 19.

Études sur les Buprestides (3e Partie), THÉRY Ann. Soc. ent. Belg. 62 pp. 193–270.

*Acmaeodera oranensis* Algeria p. 24, *tinacriae* Sicilia p. 25, *krali* Samarkand p. 26, *cairensis* p. 27, *pharao* p. 84 Egypt spp. n., OBENBERGER Casopis 20.—*A. aruensis* sp. n. Aru and Borneo p. 194, THÉRY Ann. Soc. ent. Belg. 62.

*Actenodes heros* sp. n. French Guiana p. 258, THÉRY t.c.

*Agrilodina* gen. n. p. 37, *paraguayensis* sp. n. p. 38 Paraguay, OBENBERGER Bull. Sect. ent. Mus. Nat. Prague 1.

*Agrilus pseudofallax* sp. n. U.S.A. p. 279, FROST Can. Ent. 55.—*A. sierrae* sp. n. California p. 41, VAN DYKE Bull. Brooklyn Ent. Soc. 18.—*A. bilineatus* var. *carpini* n.n. for var. *azureus* Knoll p. 105, KNULL Canad. Ent. 55.—*A. foveola* sp. n. Caucasus p. 37, ROUBAL Arch. Natg. 83 A 7 1919.—*A.* key to species p. 79, *nonfriedanus* nom. n.

for *nonfriedi* Obenb. nec Kerr. p. 64, *raphelisi*, *vandiemeni*, *domini* p. 78, *danesi* p. 79, *kurandae*, *korenskyi* p. 80, *walesicus* p. 81 spp. n., *hypoleucus* subsp. n. *cooki* Australia, *tasmanicus* Tasmania p. 77, OBENBERGER Bull. Sect. ent. Mus. Nat. Prague 1.—*A. edila* p. 4 E. Africa, *dimorphus* p. 5 (fig.), *vanrooni* p. 6, *carbo* p. 7, *rubri thorax* p. 8 spp. n., *rubri thorax* var. n. *hexaspina* p. 9, *bivittiger* p. 10, *poecilus* p. 11, *viridator* p. 12, *rarior* p. 13, *sordidatus* p. 14, *cuprosus* p. 15, *funerosus* p. 16 Kamerun, *bergrothi* p. 17 Brazil, *roscidinus* p. 18 spp. n., *roscidinus* subsp. n. *dualaecola*, *bareinus* p. 19, *victoriae* p. 20, *ekonae* p. 21, *dualae* p. 22, *florulus* p. 23, *fidelissimus* p. 23, *rothkirchi* p. 24 (fig.), *luteogramma* p. 25 spp. n., *luteogramma* ab. n. *cedens* p. 26 Kamerun, OBENBERGER Tijdschr. Ent. 66.—*A. algiricus* Algeria p. 84, *pharao* Egypt p. 85, *affectans* Algeria p. 86, spp. n., *angustulus* var. n. *maroccanus* Morocco p. 86, OBENBERGER Casopis 20.—*A. egeniformis* p. 84, *paramasculinus* p. 274 U.S.A. spp. n., CHAMPLAIN & KNULL Ent. News 34.

*Alcinous nodosus* Kerr. (= *A. minor* Kerr.) Australia p. 176, CARTER Proc. Linn. Soc. N.S.W. 48.

*Anilara* (*Melobasis*) *obscura* Macl. (= *platessa* Thoms.), *macleayi* nom. n. for *Anthaxia obscura* Macl. p. 70, CARTER Trans. Ent. Soc. 1923.

*Anthaxia mamaj* sp. n. Crimea p. 142, PLIGINSKI Rev. russe Ent. 18.—*A. hottentotta* sp. n. Cape Colony p. 117, OBENBERGER N. Beitr. system. Insektenk. 2.—*A. escalerina* n.n. for *superba* Escal. (nec Abeille) p. 64, OBENBERGER Bull. Sect. ent. Mus. Nat. Prague 1.—*A. nickerli* sp. n. Egypt p. 83, OBENBERGER Casopis 20.—*A. obscura* Macl. see *Anilara macleayi*.

*Anthaxoschema* gen. n. *terrae-reginae* sp. n. Queensland p. 23, OBENBERGER Bull. Sect. ent. Mus. Nat. Prague 1.

*Arrowia* gen. n. *marshalli* sp. n. Rhodesia p. 28, OBENBERGER t.c.

*Asidoptera* gen. n. type *monstruosa* Kerrem. p. 13, OBENBERGER t.c.

*Blepharum splendens* sp. n. (*sine loco*) p. 195, THÉRY Ann. Soc. ent. Belg. 62.

*Brachelytrium* gen. n. p. 24, *transvaalense* p. 25 Transvaal, OBENBERGER Bull. Sect. ent. Mus. Nat. Prague 1.

*Brachydora* gen. n. p. 30, *monstrum* sp. n. p. 31 (fig.) Madagascar, OBENBERGER t.c.

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*Dinocephalia* gen. n. p. 39 *gigantea* sp. n. p. 40 Queensland, OBENBERGER t.c.

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*Melanophila acuminata*, biology pp. 1–3. RYLE Ent. Mo. Mag. 59.—*M. gestroi* sp. n. Egypt p. 82, OBENBERGER Casopis 20.—*M. drummondi* var. n. *abies* Canada p. 105, CHAMPLAIN & KNULL Canad. Ent. 55.—*M. (Anthaxia) cupripes* MacL. (= *laticeps* Kerr. = *australasiae* Kerr. = *Neocuris dilataticollis* Blackb.) p. 104, CARTER Trans. Ent. Soc. 1923.

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*Montrouzieria* gen. n. p. 17, *caledonica* sp. n. p. 18 New Caledonia, OBENBERGER Bull. Sect. ent. Mus. Nat. Prague 1.

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*Neotorresita* gen. n. p. 19, *achardi* sp. n. p. 20 (fig.) Brisbane, OBENBERGER Bull. Sect. ent. Mus. Nat. Prague 1.

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*Prospherus moesta* Cart. (= *Buprestis moesta* Cart.) p. 72, OBENBERGER Bull. Sect. ent. Mus. Nat. Prague 1.

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*Sternocera marseuli* sp. n. (with subsp. n. *simulatrix*) p. 109, *aequisignata* subsp. n. *flammea* p. 110 India, OBENBERGER N. Beiträge system. Insektenk. 2.—*S. aequisignata* var. n. *birmanica* Burma p. 193, THÉRY Ann. Soc. ent. Belg. 62.

*Synechocera tasmanica* sp. n. Tasmania fig. p. 517, THÉRY Proc. Linn. Soc. N.S.W. 48.

*Taphrocerus gracilis*, bionomics, CHAPMAN Cornell Agric. Expt. Sta. Mem. 67 13 pp. 4 pls.—*T. deplanatus* sp. n. Brazil p. 268, THÉRY Ann. Soc. ent. Belg. 62.

*Tonkinula* gen. n. for *Coroebus aurofasciata* E. Id. p. 35 (fig.), OBENBERGER Bull. Sect. ent. Mus. Nat. Prague 1.

*Touzalinia* gen. n. p. 256, *psiloteroides* Yunnan p. 256, THÉRY Ann. Soc. ent. Belg. 62.

*Trachys hackeri* Queensland p. 81, *japonica*, *obscuripennis* Japan p. 65 spp. n. *aurea* Sem. (= *T. reticulata* Abeille, *T. subalutacea* Pic) p. 65, OBENBERGER Bull. Sect. ent. Mus. Nat. Prague 1.—*T. panamaensis* n.n. for *cyanipennis* p. 190, FISHER Proc. Ent. Soc. Wash. 25.

*Vanroonia* gen. n. *coraebooides* sp. n. p. 39, var. n. *kraciki* p. 30 Cameroons, OBENBERGER Bull. Sect. ent. Mus. Nat. Prague 1.

#### LUCANIDAE.

Catalogue of Lucanidae of France pp. 1-17 figs., HOULBERT & MONNOT Trav. Sci. Univ. Rennes 13 1915.

*Chiasognathus schönemanni* sp. n. Chili p. 94, KRIESCHE Arch. Natg. 83 A 11 1919.

*Cyclommatus tarandus*, variation, DUDICH Arch. Natg. Abt. 89 A 2 1923 pp. 62-96 (figs.).

*Homoderus gladiator*, synonymy, pp. 1-7 (fig.), GRIFFINI Boll. Mus. Zool. Anat. comp. 35 no. 733 1920.

*Lucanus ibericus* subsp. n. *ravasinii* Albania p. 8, SCHATZMAYR Boll. Soc. ent. ital. 15.

*Neolucanus vendli* sp. n. Formosa p. 17, DUDICH Ent. Blätter 19.

*Novonigidius* gen. n. *ornatifrons* sp. n. Borneo p. 68 (fig.), DUDICH Rovart. L. 26.

*Phalacrognathus fuscomicans* sp. n. New Guinea p. 95, KRIESCHE Arch. Natg. 83 A 11 1919.

*Sphenognathus kolbei* sp. n. Ecuador p. 94, KRIESCHE Arch. Natg. 83 A 11 1919.

#### COPRIDAE.

Catalogue, keys, etc., Copridae of France, pp. 34, 40-59, HOULBERT & MONNOT Trav. Sci. Univ. Rennes 13 1915.

Australian dung beetles of the sub-family Coprides, LEA Rec. S. Aust. Mus. 2 pp. 353-396 4 pls.

*Alloscelus* gen. n. *paradoxus* sp. n. Belgian Congo p. 40, BOUCOMONT Rev. zool. afr. 11.

*Caccobius bidentatus* Up. Mekong, *simplex* Tonkin spp. n. p. 9, BOUCOMONT Bull. Soc. ent. Fr. 1923.—*C. (Tomogonus) crassoides* sp. n. Rhodesia p. 57, BOUCOMONT Rev. zool. afr. 11.

*Copris onarcus* p. 123 Malacca, *vitalisi* p. 124 Laos, *sumatrensis* p. 125 Sumatra, *punjabensis* p. 126 Punjab, *ramosiceps* p. 126 (no loc.) spp. n. *tripartitus* var. n. *formosanus* Formosa p. 126, GILLET Ann. Soc. Sci. Bruxelles 41 1921.

*Haroldius cardoni* sp. n. India p. 83, BOUCOMONT Bull. Mus. Hist. nat. Paris 1923.

*Heteroclitopus*, key to allied genera and spp. p. 43, gilleti, Zambezi p. 44, *foveatus* E. Africa, p. 45, spp. n., BOUCOMONT Rev. zool. afr. 11.

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*Macropocopris peramelinus* sp. n. (fig.) N.S.W. p. 393, LEA Rec. S. Aust. Mus. 2.

*Monoplistes curvipes* p. 358, *phanocephalus* p. 359, *tropicus* p. 360 spp. n. Queensland, LEA t.c.

*Oniticellus fumigatus* sp. n. Congo p. 56, BOUCOMONT Rev. zool. afr. 11.

*Onthophagus hoplocerus* Victoria p. 370, *mamillatus* p. 372, *anchommatus* p. 373, *tricavicollis* p. 374, Queensland, *bicavicollis* N. Australia p. 375, *spissicollis* W. Australia p. 376, *varianus* Queensland p. 377 *flavoapicalis* W. Australia p. 378, *cibricollis* p. 379, *clypealis* p. 380 N. Australia, *microtrichus* Queensland p. 381, *variolicollis* N.W. Australia p. 382, *semimetallicus* Queensland p. 383, *cupreopunctatus* p. 384, *bicarinaticeps* p. 385 N.S.W., *sutilistriatus* p. 385, *interruptus* p. 386, *opacipennis* p. 387, *stenocerus* p. 388, *phoenicocerus* p. 389, *compositus*, *squalidus* p. 391, Queensland, *strabonis* p. 391, *imponderosus* p. 392 N. Australia spp. n. figs., LEA Rec. S. Aust. Mus. 2.—*O. siamensis* Siam, *vaulogeri*, Laos, Tonkin, spp. n. p. 10, BOUCOMONT Bull. Soc. ent. Fr. 1923.—*O. taurus* metamorphoses, p. xiv (figs.), MAIN Proc. Ent. Soc. 1922.—*O. nilgirensis* Nilgiris, *megathorax* Sumatra p. 128, *tonkineus* Tonkin p. 129 spp. n., GILLETT Ann. Soc. Sci. Bruxelles 41 1921.

*Panelus pisoniae* sp. n. N. Queensland p. 361, LEA Rec. S. Aust. Mus. 2.

*Paraphytus*, key p. 80, *africanus* Angola, *harmandi* Cochin-china, *foveatus* Sumatra p. 81 spp. n., BOUCOMONT Bull. Mus. Hist. nat. Paris 1923.

*Pedaria alternata* sp. n. N. Australia p. 394, LEA Rec. S. Aust. Mus. 2.

*Pinacotarsus*, key to allied genera and spp. p. 46, *tinantae* Congo p. 46, *laevipygus* Rhodesia p. 47, *major* Nyasaland p. 48, *discolor* Tanganyika p. 48, spp. n., BOUCOMONT Rev. zool. afr. 11.

*Proagoderus kuntzeni* pp. 12, 13, *pegeimallus* pp. 12, 16, *amblychromatus* p. 25, spp. n., *auratus* subsp. n. *patinatus* p. 37, Africa, with researches on taxonomy, etc., MARCUS Arch. Natg. 83 A 10 1919.

*Saproecius*, key to allied genera and spp. p. 51, *nitidus* Nyasa, *nodieri* Senegal p. 52, *gailliardi* Fr. Sudan p. 53 spp. n., BOUCOMONT Rev. zool. afr. 11.

*Stiptopodius*, key to allied genera and spp. p. 49, *patrizii* Somaliland p. 50, *moquerysi* Gaboon p. 51, *latetarsatus* Cameroons p. 51 spp. n., BOUCOMONT t.c.

*Tesserodon intricatus* sp. n. N. Australia p. 357, LEA Rec. S. Aust. Mus. 2.

#### APHODIIDAE.

Catalogue, keys, etc., Aphodiidae of France, pp. 34, 60–95, HOULBERT & MONNOT Trav. Sci. Univ. Rennes 13 1915.

Monograph of Aphodiidae, many new names proposed for preoccupied ones, SCHMIDT Das Tierreich Lief 45 1922 p. 1–333.

*Aphodius heterodoxus* p. 1, *integritrons* p. 2, *tricolor*, *bicrenulatus* p. 3, *parvoniger* p. 4 spp. n. Australia, LEA Proc. R. Soc. Vict. 36.

*Ataenius basiceps* p. 5, *duplicatus*, *laevifrons* p. 6, *eurynotus*, *parrus* p. 7, *spinipennis*, *insularis* p. 8, *persimilis* p. 9, *microtrichopterus*, *integricollis* p. 10, *illaetabilis* p. 11, *aphodiooides* p. 12 spp. n. Australia, LEA t.c.

*Chaetopistes tibialis* S. India pp. 575 & 579, *singalensis* Ceylon pp. 575 & 580, *brevipes* pp. 577 & 580 Chota Nagpur, *longulus* pp. 577 & 581 Kumaon spp. n. (figs.), CHAMPION & WASMANN Ann. Mag. N. H. (9) 11.

*Euparia squamosa* sp. n. Lord Howe Is. p. 15, LEA Proc. R. Soc. Vict. 36.

*Odontoderus* Clouët (nec Schwarz) see *Odontolochus*.

*Odontolochus* n.n. for *Odontoderus* Clouët (nec Schwarz) p. 465, SCHMIDT Das Tierreich Lief 45 1922.

*Proctammodes metasternalis* sp. n. Queensland p. 12, LEA Proc. R. Soc. Vict. 36.

*Psammodius litoralis* N. S. Wales, *pachypus* Lord Howe Is. spp. n. p. 17, LEA t.c.

*Rhyparus australiae* sp. n. Australia p. 19, LEA t.c.

*Rhyssemus sculptilipennis* n.n. for *reitteri* Clouët (nec Kosh.) p. 504,

*crispus* n.n. for *caelatus* Périn. (nec Le Conte) p. 510, SCHMIDT Das Tierreich Lief 45 1922.—*R. macedonicus* sp. n. Macedonia p. 243 (fig.), BÉNARD Bull. Mus. Hist. nat. Paris 1923.—*R. rhizophagus* p. 18, *insignicollis* p. 19, spp. n. Australia, LEA Proc. R. Soc. Vict. 36.

*Saprosites mesosternalis* p. 13, *castaneus* Lord Howe Is., *clypealis* p. 14, *pygidialis* p. 15 spp. n. Australia, LEA t.c.

*Termitopisthes schmidti* Kumaon pp. 571 & 577, *parallelus* pp. 574 & 578 spp. n. Dehra Dun (figs.), CHAMPION & WASMANN Ann. Mag. N. H. (9) 11.

#### TROGIDAE.

Catalogue, keys, etc., Trogidae of France, pp. 95–99, HOULBERT & MONNOT Trav. Sci. Univ. Rennes 13 1915.

#### OCHODAEIDAE.

*Ochodaeus minutus* sp. n. Abyssinia p. 5, BENDERITTER Ann. Soc. ent. Belg. 63.

#### ORPHNIIDAE.

*Orphnus gilleti* Kamerun p. 6, *sinuatus* E. Africa, Transvaal p. 7 spp. n., BENDERITTER Ann. Soc. ent. Belg. 63.

#### HYBOSORIDAE.

Catalogue, keys, etc., Hybosoridae of France, pp. 110–112, HOULBERT & MONNOT Trav. Sci. Univ. Rennes 13 1915.

*Chaetodus villosicollis* sp. n. Paraguay p. 5, BENDERITTER Ann. Soc. ent. Belg. 63.

*Phaeochroops gilleti*, W. Borneo p. 5, *angulatus* Philippines p. 6 spp. n., BENDERITTER t.c.

#### GEOTRUPIDAE.

Catalogue, keys, etc., Geotrupidae of France, pp. 99–110, HOULBERT & MONNOT Trav. Sci. Univ. Rennes 13 1915.

#### GLAPHYRIDAE.

*Glaphyrus serratulae* subsp. n. *maroccanus*, s. *subcylaneus*, *theryi*, *violaceipennis*, *antoinei*, Morocco, *cyaneoviridis* Algeria abb. n., p. 20, CHOBAUT Bull. Soc. Sci. nat. Maroc 3.

## MELOLONTHIDAE.

Catalogue, keys, etc., Melolonthidae of France, pp. 36, 117-134, HOULBERT & MONNOT Trav. Sci. Univ. Rennes 13 1915.

*Ancistrosoma arrowi* sp. n. Santa Fe de Bogota p. 222, LEY Bull. Soc. ent. Fr. 1923.

*Castanochilus bruchianus* ♀ pp. 115-119 (fig.), BRUCH Physis 7.

*Elaphocera onubensis* p. 400, *abderamani* p. 403 spp. n. Spain, ESCALERA Bol. Soc. esp. Hist. nat. 23.

*Elaphocerida pygmaea* p. 405, *seguren-sis* p. 408 spp. n. Spain, ESCALERA t.c.

*Homaloplia lonae* sp. n. Albania p. 7, SCHATZMAYR Boll. Soc. ent. ital. 15.

*Melolontha melolontha* ab. n. *ambly-pyga* Poland p. 1 (fig.), LOMNICKI Polsk. Pismo Ent. 2.

*Mericserica chilkensis* sp. n. Barkuda I. p. 260, ARROW Rec. Ind. Mus. 25.

*Pachypus*, Italian species, varieties pp. 50-64, *candidae* ab. n. *caesicolor* Italy p. 56, LUIGIONI Mem. Soc. ent. ital. 2.

*Sphodroxia algerica* female p. 127, *maroccana* sp. n. Morocco p. 128, LEY Bull. Soc. ent. Fr. 1923.

## RUTELIDAE.

Catalogue, keys, etc., Rutelidae of France, pp. 37, 134-147, HOULBERT & MONOT Trav. Sci. Univ. Rennes 13 1915.

*Adoretosoma fusipes* sp. n. China p. 76, HELLER Ent. Blätter 19.

*Adoretus occultus*, *vigilans* p. 59, *rufus* p. 60, *avitus*, *pudicus* p. 61, *exiguus* p. 62, (figs.) spp. n., Belgian Congo, BENDERITTER Rev. zool. afr. 11.—*A. speculator* sp. n. Borneo p. 590, OHAUS Philipp. J. Sci. 22.

*Anisoplia georgi* sp. n. Albania p. 7, SCHATZMAYR Boll. Soc. ent. ital. 15.

*Anomala sibuyana*, *melitta* p. 582, *surigana*, *butuana* figs. p. 583, *volanda*, *macrophalla* figs. p. 584, *polina*, *sama-rensis* fig. p. 585, *cucusa* p. 586, *cal-purnia*, *cassiana* figs. p. 587 Philippines, *metella* fig. Borneo p. 588 spp. n., OHAUS Philipp. J. Sci. 22.—*A. pudica* E. Africa, *crassipyga* Yunnan and

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Thibet spp. n. p. 218, BENDERITTER Bull. Soc. ent. Fr. 1923.—*A. ebenina* var. n. *ochracea* Ichang p. 8, BENDERITTER Ann. Soc. ent. Belg. 63.

*Aprosterna paleopyga* p. 91, *rubra* p. 92 Dahomey, *crassa* Ivory Coast p. 217 spp. n. figs., BENDERITTER Bull. Soc. ent. Fr. 1923.

*Calloodes translucidus* sp. n. Queensland p. 93 fig., BENDERITTER t.c.

*Chaetadoretus rusticus* p. 62, *prudens* p. 63, (figs.) spp. n. Belgian Congo, BENDERITTER Rev. zool. afr. 11.—*C. bakeri* sp. n. Philippines p. 590, OHAUS Philipp. J. Sci. 22.

*Cymboptera* gen. n. *peringueyi* sp. n. Uganda p. 167, OHAUS D. ent. Zs. 1923.

*Gilletia* gen. n. near *Lagochile* for *nigriceps* sp. n. Peru p. 217, BENDERITTER Bull. Soc. ent. Fr. 1923.

*Gnatholabis sexmaculata* sp. n. Congo p. 219, BENDERITTER t.c.

*Lagochile flavomarginata* Colombia, Bolivia, *castanea* Guiana spp. n. p. 91 figs., BENDERITTER t.c.

*Macraspis xanthosticta* var. n. *nigri-pennis* (*sine loco*) p. 216, BENDERITTER t.c.

*Malaia stigma* sp. n. Philippines p. 589, OHAUS Philipp. J. Sci. 22.

*Oxychirus gabonensis* sp. n. Gaboon p. 216, BENDERITTER Bull. Soc. ent. Fr. 1923.

*Parastasia incurva* sp. n. Philippines fig. p. 581, OHAUS Philipp. J. Sci. 22.

*Popillia nona* fig., *altilcola* spp. n. Philippines p. 589, OHAUS t.c.

*Rhinyptia gilletti* sp. n. Ceylon p. 7, BENDERITTER Ann. Soc. ent. Belg. 63.

*Spilota metallica* sp. n. Tonkin p. 219, BENDERITTER Bull. Soc. ent. Fr. 1923.

*Strigoderma apicalis* sp. n. Tonkin p. 92, BENDERITTER t.c.

## DYNASTIDAE.

Catalogue, keys, etc., Dynastidae of France, pp. 112-117, HOULBERT & MONNOT Trav. Sci. Univ. Rennes 13 1915.

Characters, phylogeny and distribution of Dynastidae pp. 194-211, MINCK Arch. Naturg. 84 A 8 1920.

*Cyclocephala capitata* Mexico p. 253,  
*maculiventris* p. 345, *signatoides* p. 346,  
*quadripunctata* p. 348, *rorulenta* p. 349,  
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America, subsp. n., HÖHNE D. ent. Zs.  
1923.

*Dyscinetus olivaceus* sp. n. S. America  
p. 253, HÖHNE t.c.

*Megasoma janus* subsp. n. *argentinum*  
S. America p. 254, HÖHNE t.c.

*Oryctes* (*Rykanoryctes*, *Rykanes*, sub-  
gg. n.) p. 59, MINCK Arch. Natg. 83 A  
2 1919.—*O. nasicornis*, oldest records,  
p. 88, MINCK Arch. Naturg. 83 A 4  
1920.

*Rykanes* subgen. n. see *Oryctes*.

*Rykanoryctes* subgen. n. see *Oryctes*.

*Trypoxylus* gen. n. for *dichotomus*  
Ol. and *davidis* Frm. p. 216, MINCK  
Arch. Naturg. 84 A 8 1920.

*Xylotrupes tonkinensis* Himalaya,  
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*gideon* subsp. n. *borneensis* Borneo p.  
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#### CETONIIDAE.

Catalogue, keys, etc., Cetoniidae of  
France, pp. 38, 148–168, HOULBERT &  
MONNOT Trav. Sci. Univ. Rennes 13  
1915.

*Atropinota* gen. n. near *Epicometis*,  
*funkei* sp. n. China p. 78, HELLER Ent.  
Blätter 19.

*Campsurga omisirena* sp. n. China p. 77,  
HELLER t.c.

*Cetonia kolbei* sp. n. China p. (125)  
(fig.), CURTI Verh. zool.-bot. Ges. Wien  
64 1914.

*Charadronota quadrisignata* preissi  
p. 139, *pectoralis angularis* p. 140, varr.  
n., ONDŘEJ Arch. Natg. 83 A 4 1919.

*Coptomia* (*Adonides*) *razananae* sp. n.  
Madagascar p. 139, BOURGOIN Bull. Soc.  
ent. Fr. 1923.

*Coptomiopsis razonanae* sp. n. Madag-  
ascar p. 140, BOURGOIN t.c.

*Eudicella morgani* var. n. *darandi*  
French Guinea p. 219, BOURGOIN t.c.

*Lasiotrichius succinctus* var. n. *amu-  
rensis* Siberia p. 6, PIC Échange 39.

*Macronota lactica* sp. n. Cochinchina  
p. 162, BOURGOIN Bull. Soc. ent. Fr.  
1923.

*Mausoleopsis seillierei*, *comoriensis*  
p. 163 Comoro Is., *fallaciosa* p. 164  
Ethiopia, spp. n., BOURGOIN t.c.

*Pachnoda oberländeri* sp. n. Br. E.  
Africa p. 136, fig., ONDŘEJ Arch. Natg.  
83 A 4 1919.

*Platysodes madoni* sp. n. Tonkin p.  
220, BOURGOIN Bull. Soc. ent. Fr. 1923.

*Porphyronota nyassica* var. n. *imita-  
trix* p. 137, ONDŘEJ Arch. Natg. 83 A 4  
1919.

*Pseudagenius* gen. n. near *Paratri-  
chius* Jans., *testaceipennis* sp. n. China  
p. 79, HELLER Ent. Blätter 19.

*Trichius fasciatus* ab. n. *merkli* p. 39,  
ROUBAL Arch. Natg. 83 A 7 1919.—*T.  
orientalis* varr. n. *notatipennis*,  
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Algeria, *rosaceus* varr. n. *externenotatus*  
Corsica, *edoughensis* and *multinotatus*  
Algeria, *fasciatus* var. n. *bisbinotatus*  
France p. 6, PIC Échange 39.

#### TENEBRIONIDAE.

Dalmatian Tenebrionids, with keys,  
MÜLLER Verh. zool.-bot. Ges. Wien 70  
1920 pp. 132–133.

Monograph of the South American  
Camariinae, with appendix on the  
Indian genera, GEBIEN Arch. Natg. 83  
A 3 1919 pp. 25–167 2 pls. 38 text-figs.

*Acanthocamaria* gen. n. p. 31, *brun-  
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GEBIEN Arch. Natg. 83 A 3 1919.

*Alphitobius instratus* Sumatra, *tes-  
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exot. Ent. 40.

*Amarygmus phungi, bicoloriceps* p. 20,  
*blaisei* p. 21 spp. n. Tonkin, PIC op. cit.  
38.

*Amenophis (Derilis) instriatus* sp. n.  
French Congo p. 64, PIC Bull. Soc. ent.  
Fr. 1923.

*Anaedus multiimpressus* Indo-China,  
*lateralis* Tonkin spp. n. p. 16, PIC  
Échange 39.

*Anemia drurei* Iraq, *curticollis*  
Algeria, *denticulata* Cairo spp. n. p. 5,  
PIC t.c.

*Anepsius confluens* p. 243, *angulatus*  
p. 244 spp. n. Mexico, BLAISDELL Proc.  
Cal. Acad. Sci. 12.

*Apentanodes mesopotamicus* sp. n.  
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*Argoporis labialis* p. 258, *aequalis* p.  
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BLAISDELL Proc. Cal. Acad. Sci. 12.

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*Asidoblaps szetschwana* sp. n. China  
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*Blapida striatipennis*, *ruficurris* pp.  
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spp. n., S. America, GEBIEN Arch. Natg.  
83 A 3 1919.

*Blaps sunpan'inga* p. 30, *waschana*,  
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*Blapstinus aridus* p. 270, *paradoxus*  
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*Derosphaerus impunctatus* Sumatra,  
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*Hoploedipus acanthosternus* sp. n. Borneo p. 163 figs., GEBIEN Arch. Natg. 83 A 3 1919.

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*Oxycara becharensis* sp. n. Algeria p. 165, CHOBAUT Bull. Soc. ent. Fr. 1923.

*Pachychila forticornis*, sp. n., Morocco, p. 129, ESCALERA Bol. Soc. esp. Hist. nat. 23.

*Pachylesthus grandis, ciliatipes* spp. n. Asiatic Arch. p. 29, PIC Mél. Exot. Ent. 38.

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*Pimelia* (*Piesterotarsa*) *angulata* subsp. n. *expiata* Sahara, p. 319, PEYERIMHOFF Bull. Soc. ent. Fr. 1922.—*P. xauenensis*, sp. n., Morocco, p. 130, ESCALERA Bol. Soc. esp. Hist. nat. 23.

*Platyscelis aenescens* sp. n. Thibet p. 284, BLAIR Ann. Mag. N. H. (9) 11.—*P. (Platynoscelis) subaenescens* sp. n. China p. 160, SCHUSTER Wiener ent. Ztg. 40.

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*Tenebrio* larvae pp. 121-159, ARENDSEN HEIN Ent. Mitt. Berlin 12.—*T. molitor* ab. n. *flavus* Poland p. 18, TRELLA Polskie Pismo Ent. 2.

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*Stitira*, key to N. American species, p. 185, *liebecki* sp. n. Fla. and Alabama p. 187, LENG J. N. Y. Fnt. Soc. 31.

## ANTHICIDAE.

Anthicidae of Adriatic coast and Dalmatia, revision p. 62 (figs.), KREKICH-STRASSOLDO Boll. Soc. Adriat. 26 2 1912.

*Allaeoceras* gen. n. near *Anthicomorphus* p. (218), *longicornis* p. (218), *argenteomaculatum* p. (221) Ceylon spp. n. (fig.), KREKICH-STRASSOLDO Verh. zool.-bot. Ges. Wien 64 1914.

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*Ischyropalpus adstrictus* sp. n. Peru p. (221), KREKICH-STRASSOLDO Verh. zool.-bot. Ges. Wien 64 1914.

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#### RHIPIPHORIDAE.

Bibliography and nomenclature of Rhipiphoridae pp. 167–169, SCHILDER Ent. Blätter 19.

Rhipiphoridae from Formosa pp. 202–204, SCHILDER Ent. Mitt. 12.

*Cyttaroecus* n.n. for *Metoecus* (Dej.) Gerst. type *Mordella paradoxa* L. p. 169, SCHILDER Ent. Blätter 19.

*Evaniocera atricornis* sp. n. Rhodesia p. 16, PIC Mél. Exot. Ent. 39.—*E. pygmaea* p. 614 Benguella, herero S.W. Africa p. 615 spp. n., SCHILDER D. ent. Zs. 1923.

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*Rhipidius longicollis* sp. n. Formosa p. 203, SCHILDER Ent. Mitt. 12.

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#### MELOIDAE.

Development, morphology and biology of Meloidae, VERHOEFF Arch. Natg. 83 A 2 pp. 102–140 1 pl.

Materials for the biology of Siberian Mylabrids, with descriptions of their Triungulins, PUCHOV Bull. Siberian Ent. Bur. no. 2 pp. 45–53 (fig.).

*Diaphorocera obscuritarsis* var. n. *ruficornis* Egypt p. 10, PIC Échange 39.

*Halosimus cabrerai*, sp. n., Morocco, p. 299, ESCALERA Bol. Soc. esp. Hist. nat. 23.

*Leptopalpus rostratus* habits and primary larva, CROS Bull. Soc. Hist. nat. Afr. N. 14 pp. 327–337 1 pl.

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*Pseudomeloë roubaudi* sp. n. Peru p. 618, ESCOMEL Bull. Soc. Path. exot. 24.

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#### TRIC TENOTOMIDAE.

*Trictenotoma davidi* subsp. n. *formosana* p. 150, KRIESCHE Arch. Natg. 83 A 11 1919.

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*Lissodema quadridentatum* sp. n. Almora (India) p. 79, CHAMPION Ent. Mo. Mag. 59.

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Elacatidae proposed for Othniidae, p. 83, CHAPIN Phil. J. Sci. 22.

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*Parelacatis* gen. n. type *bakeri* sp. n. Philippines figs. p. 86, CHAPIN t.c.

#### CURCULIONIDAE.

List of Curculionidae of Spain and Balearic Is. (cont'd.) pp. 109-128, 198-224, IGLESIAS Rev. Acad. Ci. Madrid 19 1921.

Curculionidae de la faune franco-rhénane (cont'd.), HUSTACHE Misc. ent. 27 pp. 63-142 sep. pag.

A Monograph of the Pachyrhynchid group of the Brachyderinae, Curculionidae, SCHULTZE Philipp. J. Sci. 23 pp. 609-673 6 pls. 3 tables.

Key to genera of Leptopini, p. 146, HELLER Kol. Rundsch. 10.

Revision of Attelabinae, keys to East-Adriatic genera and spp. pp. 58-85, MÜLLER Boll. Soc. Adriat. 27 1 1913.

*Acicnemis* key to spp. p. 101, *latipennis* Sumatra p. 125, *bickhardti* Formosa p. 126, *minor* Philippines p. 130, *tibialis* Sumatra p. 131, *ovalipennis* p. 132, *rectangula* p. 133 Philippines, *superba* Borneo p. 134, *corpulenta* Java, Sumatra, *delicatula* p. 136, *helleri* p. 137 Borneo, *dohrni* p. 138, *schroederi* p. 140 Sumatra, *curta* Borneo p. 141, *schenklingi*, *apicenotata* Sumatra p. 142,

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*Aedemonophilus* gen. n. (Cryptorrhynchini) *erirrhinoideus* sp. n. Mozambique p. 75, HUSTACHE Bull. Mus. Hist. nat. Paris 1923.

*Aedriodes foveolatus* p. 407, *mucronatus* p. 408, *tibialis* p. 409, *crawshawi* spp. n. W. Australia p. 410, FERGUSON Proc. Linn. Soc. N.S.W. 48.

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*Anthonomus pomorum*, longevity and sex development pp. 68–70, SPEYER Zs. Schädlingsbekämpfung 1.

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*Bubaris carteri* sp. n. Queensland p. 402, FERGUSON Proc. Linn. Soc. N.S.W. 48.

*Byctiscidius* gen. n. (near *Rhynchites*) for *R. parcus* Voss, *insularis* sp. n. Penang p. 510, Voss Philipp. J. Sci. 22.

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*Chaunoderus congoanus* p. 57, *antennatus, t-album* p. 58 spp. n. Africa, HUSTACHE Ann. Soc. linn. Lyon 66 1920.

*Chloropholus africanus* sp. n. S.E. Africa p. 548 (fig.), MARSHALL Ann. Mag. N. H. (9) 11.

*Cionus* larvae, morphology and biology, VERHOEFF Arch. Natg. 83 A 1 pp. 52–69 1 pl.—*C. alauda* biology pp. 86–87, URBAN Ent. Blätter 19.

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Paris 1923.—*E. obscurus*, *congoanus*,  
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*Formanekia* gen. n. p. 15, *sibirica* sp.  
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*Ischnotrachelus spinicollis* sp. n. Congo  
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*Pantorhytes*, notes on New Guinea p. 61, *papuanus* sp. n. New Guinea p. 63, GESTRO Boll. Soc. ent. ital. 55.

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*Paremydica hirtella* sp. n. C. Africa p. 76, HUSTACHE Bull. Mus. Hist. nat. Paris 1923.

*Paroditesus* gen. n. type *Oditesus tibialis* Lea W. Australia p. 427, FERGUSON Proc. Linn. Soc. N.S.W. 48.

*Pentarthrum opazioi* sp. n. Chile p. 29, BRÈTHES An. Zool. appl. 6 1919.

*Peritelus setabensis* sp. n. Spain, HUSTACHE An. Inst. gen. tec. Valencia Trab. Lab. Hist. nat. No. 10 1921.

*Peritmetus abyssinicus* sp. n. Abyssinia p. 61, HUSTACHE Ann. Soc. linn. Lyon 66 1920.—*P. oblongus* sp. n. Belgian Congo p. 175, HUSTACHE Rev. zool. afr. 11.

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*Pissodes pini* ab. n. *caucasicus* p. 39, ROBAL Arch. Natg. 83 A 7 1919.

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*Poteriophorus uhlemanni* var. n. *regularis* Isl. Polillo p. 13, HELLER Stett. ent. Zg. 84.

*Proictes dentipes* sp. n. Ivory Coast p. 45, HUSTACHE Ann. Soc. linn. Lyon 66 1920.

*Prosayleus phytolymus* life-history, GALLARD Austr. Nat. 4 1920 pp. 147-148.

*Prosccephaladeres dispar* sp. n. Portuguese E. Africa p. 532, MARSHALL Ann. Mag. N. H. (9) 11.

*Protostrophus indotatus* p. 533, *perditor* p. 537 Transvaal, *purcelli* p. 534, *cavirostris* p. 536 Cape Province, *sebakuanus* Rhodesia p. 535 (figs.), MARSHALL t.c.

*Pseudophytobius antoinei* sp. n. Morocco p. 72, HUSTACHE Bull. Soc. Sci. nat. Maroc 3.

*Rhinaria maculiventris* sp. n. Pearson Island p. 358, LEA Trans. R. Soc. S. Australia 47.

*Rhinosomphus albolineatus* sp. n. E. Africa p. 63, HUSTACHE Ann. Soc. linn. Lyon 66 1920.—*R. setosus* sp. n. Belgian Congo p. 174, HUSTACHE Rev. zool. afr. 11.

*Rhodobaenus 13-punctatus*, biology p. 103, WEISS & LOTT Ent. News 34.

*Rhynchites*, new subgenera of, p. 489, (*Lasiorhynchidius* subgen. n.) *curtirostris* p. 489, *dapitanus* p. 490 Philippines, *griseipilosus* Borneo, (*Auletomorphus* subgen. n.) *isabellinus* p. 491, *latusculus* p. 492 Philippines, *gracilirostris* p. 493 Borneo, *pilifer* Philippines p. 494, *infuscatus*, *pectoralis* Borneo p. 495, (*Piaxorhynchites* subgen. n.) *pedestris* Borneo p. 496, (*Involvulus*) *spadiceus* Philippines p. 497, *antennalis*, *nigriclavatus* p. 498 Borneo, *pallidipennis* p. 499, *pectitus* p. 500, *weberi*, *balneator* p. 501, *helleri* p. 502, *plagiocephalus* p. 503 Philippines, *sandakanensis* Borneo, *furtivus* p. 504, *rugiceps* Philippines, *foveifrons* p. 505 Singapore, *discretus*, *dissimilicolor* p. 506 Borneo, *furnus* p. 507, *pellitus*, *pilumnus* p. 508, (*Metarhynchites* subgen. n.) *arduus* p. 510 Philippines spp. n., Voss Philipp. J. Sci. 22.—*R. praestus* ab. n. *limbatus* Eastern Adriatic coast p. 80, MÜLLER Boll. Soc. Adriat. 27 1 1913.—*R. punctipennis*, *fulvopubens* spp. n. Congo p. 153, HUSTACHE Rev. zool. afr. 11.—*R. corvinus* Pascoe, *laevigatus* Pascoe see *Listrobryctiscus*.—*R. parcus* see *Byctiscidius*.

*Rhytidorrhinus*, key to Palaearctic species p. 31, (*Trichorhinus*) *axillaris* (fig.) sp. n. Spain p. 34, (*Asperorhinus*) *mauritanicus* (fig.) sp. n. Morocco, MELICHAR Casopis 20.

*Siderodactylus brunneus* p. 49, *denticipes*, *praestus* p. 51, *rubromaculatus* p. 52, *ellenbergeri* p. 54 spp. n. Tropical Africa, HUSTACHE Ann. Soc. linn. Lyon 66 1920.—*S. latirostris* p. 148, *lineolatus* p. 149 Angola spp. n., HUSTACHE Bull. Mus. Hist. nat. Paris 1923.

*Sitona*, key to Eastern Adriatic spp. p. 88, *Sitonidius* subgen. n. for *griseus* and *cachecta* p. 89, MÜLLER Boll. Soc. Adriat. 27 1 1913.

*Sitonidius* subgen. n. see *Sitona*.

*Smicronyx cuscatae* sp. n. India p. 288, MARSHALL Ann. Mag. N. H. (9) 12.

*Solariola*, key to species p. 56, *gestroi* subsp. n. *hirtula* S. Italy p. 52, *vitalei* p. 53, *doderoi* p. 55 Sicily spp. n., SOLARI Boll. Soc. ent. ital. 55.

*Stephanocleonus plumbeus*, habits, Tennessee p. 218, MARCOVITCH Canad. Ent. 55.

*Stromborrhinus caudatus* sp. n. C. Africa p. 74, HUSTACHE Bull. Mus. Hist. nat. Paris 1923.

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*Syntaphocerus obsoletus* sp. n. E. Tanganyika p. 178, HUSTACHE Rev. zool. afr. 11.—*S. terrenus* sp. n. Congo p. 60, HUSTACHE Ann. Soc. linn. Lyon 66 1920.

*Systates bispinosus* sp. n. p. 158, *angulipennis* Qued. var. n. *micans*, *laevistriatus* p. 159, *proximus* p. 160 Belgian Congo, *bayeri* p. 161, *lineatulus* p. 162 Br. E. Africa, *brevis* p. 162, *otiorrhynchoides* p. 163, *rubripes* p. 164, *pilipennis* p. 165, *nemoralis* p. 166, *uncinatus*, *granulipennis* p. 167, *bequaerti* p. 168, *kapirense* p. 169 Belgian Congo spp. n., HUSTACHE Rev. zool. afr. 11.

*Tanymecus benguelensis* sp. n. Angola, p. 147, HUSTACHE Bull. Mus. Hist. nat. Paris 1923.—*T. micans* p. 46, *mozambicus* p. 47, *abyssinicus* p. 48, *potteri* p. 49 spp. n. Tropical Africa, HUSTACHE Ann. Soc. linn. Lyon 66 1920.

†*Tillyardiopsis* gen. n. p. 64, *tuberculata* p. 65, *granulata* p. 66, *variotuberculata* p. 67 spp. n. Mesozoic Queensland (figs.), TILLYARD Publ. Queensl. Geol. Surv. 273.

*Timola posticata* sp. n. S. Africa p. 550 (fig.), MARSHALL Ann. Mag. N. H. (9) 11.

*Trachyphloeus*, key to spp. from Spain and N. Africa, p. 433, *uhagonii*, p. 435, *ontigolensis*, *complutensis* p. 436, *lucusensis*, p. 437, *algesiranus* (with var. *walkeri*) p. 439, *pustulatus* *varr. n. centralis*, *valentinus*, *alicantinus*, p. 443, (figs.), Spain and N. Africa, ESCALERA Boll. Soc. esp. Hist. nat. 23.—*T. hardenbergi* sp. n. Portuguese E. Africa p. 542 (figs.), MARSHALL Ann. Mag. N. H. (9) 11.

*Trigonocolus amplicollis* sp. n. Angola p. 236, HUSTACHE Bull. Mus. Hist. nat. Paris 1923.

*Troglorhynchus intermedius* sp. n. Morocco p. 66, HUSTACHE Bull. Soc. Sci. nat. Maroc 3.

*Tychius brunnensis* Moravia p. 60, *mazurai* Caucasus p. 61 spp. n., FORMÁNEK Wiener Ent. Ztg. 40.—*T. chaboti* sp. n. Angola p. 237, HUSTACHE Bull. Mus. Hist. nat. Paris 1923.—*T. subdentatus* sp. n. Egypt p. 103, PIC Bull. Soc. R. ent. Egypte 1922.

*Zantoidus* gen. n. p. 24, *hypocritus* sp. n. Rhodesia p. 25, HUSTACHE Ann. Soc. linn. Lyon 69.

## SCOLYTIDAE.

Supplementary bibliographic list of Scolytidae, pp. 165–180, KLEINE Zts. angew. Ent. 9.

Notes on the nomenclature of the Scolytidae p. 269, WINN-SAMPSON Ann. Mag. N. H. (9) 11.

Habits of Ceylonese Ambrosia-Beetles, pp. 11–23 (figs.), SPEYER Bull. Ent. Res. 14.

Swedish bark-beetles pp. 200–214 (fig.), SPESSIVTSEFF Ent. Tidskr. 44.

*Aphanarthrum*, key to species p. 57, *alluaudi* p. 52, *mairei* (fig.) p. 53, spp. n. Morocco, PEYERIMHOFF Bull. Soc. Sci. nat. Maroc 3.

*Cnemonyx* Eichh. (= *Minulus* Egg.), *barbatus* not a European species, p. 138, EGgers Ent. Blätter 19.

*Coccotrypes cardamoni* Schauf. see *Dendrugus*.

*Cryphalus mainensis* sp. n. (fig.) Maine p. 126, BLACKMAN N. Y. State Coll. Forestry Tech. Pubn. 16.—*C. fulvus* Niissima (= *pini* Eggers) p. 139, EGgers Ent. Blätter 19.

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*Hylocurus*, revision, pp. 142–146, *parkinsoniae* sp. n. (fig.) Arizona p. 142, BLACKMAN N. Y. State Coll. Forestry Tech. Pubn. 16.

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*Micrais*, restricted use of, pp. 143–146, BLACKMAN N. Y. State Coll. Forestry Tech. Pubn. 16.

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*Xyleborus recidens* p. 287, *turbineus*, *elegans* p. 288, spp. n., India, WINN-SAMPSON Ann. Mag. N. H. (9) 11.—*X. desectus* Philippines p. 167, *laticaudatus* p. 168, *abruptus*, *sirambeanus* Sumatra p. 169, *truncatiformis* New Guinea, *trepanicauda* Sumatra, Borneo p. 170, *longior* New Guinea p. 171, *obtusus* Sumatra, *ursa* New Guinea p. 172, *ursulus* Bali, *ursus* Philippines (with var. n. *fuscus* Sumatra) p. 173,

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*Xylechinus americanus* sp. n. Maine p. 117 (fig.), BLACKMAN N. Y. State Coll. Forestry Tech. Pubn. 16.

#### PLATYPODIDAE.

Morphology of the exo-skeleton of the Platypodidae, STROHMEYER Arch. Naturg. pp. 1-42 (figs.) Abt. A 84 Heft 7 1920.

*Platypus abruptus* p. 285, *curtatus* p. 286 spp. n., India, WINN-SAMPSON Ann. Mag. N. H. (9) 11.

## BRENTHIDAE.

Determination of Power's MS. species of Brentidae (not given in detail below) pp. 58–63, KLEINE Zool. Med. Leiden 6 1921.

New biological notes on Brentidae p. 619, KLEINE D. ent. Zs. 1923.

List of Malayan Brentidae p. 279, KLEINE J. Malayan Br. R. Asiat. Soc. 1.

The wings of Brentidae, pp. 1–30, KLEINE Arch. Naturg. 85 A 8 1920.

Stridulatory apparatus of Brentidae pp. 1–84 (figs.), KLEINE Arch. Naturg. 84 A 10 1920.

Additions to the Philippine Brentidae p. 157, KLEINE Ent. Blätter 19.

*Agrioblepis* gen. n. (Ceocephalini) p. 62, *hova* sp. n. Madagascar p. 63, KLEINE Zool. Med. Leiden 6 1921.

*Allodapinus* n.n. for *Allodapus* Kleine (nec Fieber) p. 72, HEDICKE D. ent. Zs. 1923.

*Allodapus* Kleine see *Allodapinus*.

*Amerismus ardens* sp. n. Madagascar p. 53, KLEINE Bull. Sect. ent. Mus. Nat. Prague 1.

*Aneorhachis* gen. n. p. 135, *astrictus* p. 136 (fig.) Nilgiri Hills, KLEINE Arch. Natg. Abt. A 89 Heft 8.

*Arrhenodes* notes on Central American p. 169 (figs.), KLEINE Arch. Natg. Abt. A 89 Heft 4.—*A. appositus* sp. n. Brazil p. 51 (fig.), KLEINE Bull. Sect. ent. Mus. Nat. Prague 1.—*A. approximatus* Walk. see *Baryrrhynchus miles* Boh.

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*Ceocephalus* see *Uropterus*.

*Cerobates clinatus* sp. n. Java p. 405, KLEINE Treubia 3.—*C. articulosus* sp. n. Nilgiri Hills p. 134, KLEINE Arch. Natg. Abt. A 89 Heft 8.—*C. aciculatus* Wlk. see *Euphenges*.

*Ceocephalus carus* Wlk. see *Opisthenoplus*.

*Debora*, revision, KLEINE Arch. Natg. 83 A 2 1919 pp. 18–37, 9 figs.

*Desgodinsia ambigua* sp. n. Borneo p. 130 (fig.), KLEINE Arch. Natg. Abt. A 89 Heft 8.

*Diurus deruptus* Sarawak, *celsus* p. 274, *completus* p. 276 spp. n. Malay Peninsula (figs.), KLEINE J. Malayan Br. R. Asiat. Soc. 1.

*Ectocemus* notes on, Asiatic Archipelago p. 157 (figs.), KLEINE Arch. Natg. Abt. A 89 Heft 4.

*Elytracantha cerberus* sp. n. New Guinea p. 37, fig., KLEINE Arch. Natg. 83 A 1 1919.

*Epigogus* gen. n. near *Cyphagogus*, *flexibilis* sp. n. Philippines p. 159 (fig.), KLEINE Ent. Blätter 19.

*Euphenges aciculatus* Wlk., transferred from *Cerobates* p. 90, KLEINE D. ent. Zs. 1923.

*Heteroblysmia electa* p. 164 (fig.), *formidolosa* p. 165 (fig.) Philippines spp. n., KLEINE Ent. Blätter 19.

*Holobrenthus* gen. n. p. 52, *aptus* sp. n. p. 53 (fig.) Mexico, KLEINE Bull. Sect. ent. Mus. Nat. Prague 1.

*Holotrachelus* gen. n., *comparabilis* sp. n., Malay Peninsula p. 276 (figs.), KLEINE J. Malayan Br. R. Asiat. Soc. 1.

*Hypomiolispa consociata* sp. n. Sumatra p. 408, KLEINE Treubia 3.—*H. demissa* sp. n. Selangor p. 271 (fig.), KLEINE J. Malayan Br. R. Asiat. Soc. 1.

*Isoceocephalus* gen. n. genotype *rufescens* Thoms. p. 47, KLEINE Arch. Naturg. 84 A 11 1920.

*Ithystenomorphus* subg. n. see *Ithystenus*.

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*Jonthocerus*, revision p. 30, key p. 35, *laticostatus* Formosa p. 38, *asiaticus* Philippines, Formosa p. 47 spp. n. (figs.), KLEINE Arch. Naturg. 85 A 8 1920.

*Leptamorphocephalus foederatus* sp. n. Philippines p. 163, KLEINE Ent. Blätter 19.

*Mesitogenus* gen. n. p. 7, *amorphocephalooides* sp. n. Sumatra p. 9, figs., KLEINE Arch. Natg. 83 A 2 1919.

*Mesoderes fessus* sp. n. Philippines p. 160, KLEINE Ent. Blätter 19.—*M. argutus*, *aridus* spp. n. Nilgiri Hills p. 132 (fig.), KLEINE Arch. Natg. Abt. A 89 Heft 8.

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*Microtrachelizus fluxus* sp. n. Philippines p. 162, KLEINE Ent. Blätter 19.—*M. attritus* sp. n. Nilgiri Hills p. 136, KLEINE Arch. Natg. Abt. A 89 Heft 8.

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*Nemocephalus scottii* sp. n. Amazons p. 181, KLEINE Arch. Natg. Abt. A 89 Heft 8.

*Neosebus biguttatus* p. 59 Borneo, *pretiosus* p. 60 Java spp. n., KLEINE Zool. Med. Leiden 6 1921.

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*Opisthenorys arrogan-* sp. n. Nilgiri Hills p. 133, KLEINE Arch. Natg. Abt. A 89 Heft 8.

*Palaeococephalus* gen. n. p. 48, *nitidissimus* sp. n. p. 49 (fig.) Madagascar, KLEINE Arch. Naturg. 84 A 11 1920.

*Paryphobrenthus*, redescription p. 2 (figs.), KLEINE Arch. Naturg. 84 A 11 1920.

*Peraprophthalmus* gen. n. p. 49, *applicatus* sp. n. p. 51 (fig.) E. India, KLEINE Bull. Sect. ent. Mus. Nat. Prague 1.

*Perisymmorphocerus* gen. n. p. 13, *gracilis* p. 15, *tenuis*, *sulcifrons* p. 16, *compactus* p. 17, figs., spp. n., Africa, KLEINE Arch. Natg. 83 A 2 1919.

*Prophthalmus apparatus* sp. n. East India p. 48 (fig.), KLEINE Bull. Sect. ent. Mus. Nat. Prague 1.

*Prosorychodes* gen. n. near *Pseudorychodes* Senna p. 409, *consonus* sp. n. Sumatra p. 410 (fig.), KLEINE Treubia 3.

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*Sygenithystenus* subg. n. see *Ithy-* *stenus*.

*Synorychodes formidabilis* sp. n. Philippines p. 163 (fig.), KLEINE Ent. Blätter 19.

*Taphroderes annulatus* sp. n. Bogota p. 60, KLEINE Zool. Med. Leiden 6 1921.

*Uropterus* (= *Ceocephalus*) p. 9, KLEINE Arch. Naturg. 84 A 11 1920.

## ANTHRIBIDAE.

*Acorynus frontalis* subsp. n. *oceani*  
Batoe Is. p. 216, JORDAN Nov. Zool. 30.

*Anthribus subroseus* Reitt. (= *A. clopi* Chob.), PIC Échange 39.

*Blabirhinus obliquus* Banguey Island p. 167, *plumbeus* Malay Peninsula p. 168 spp. n., JORDAN Nov. Zool. 30.

*Ecelonerus molitor* Woodlark Is., *albinasus* p. 219, *virgatus* spp. n. Australia p. 220, JORDAN t.c.

*Eupanteos* gen. n. *ornatus* N. S. Wales p. 169, *doddi* Queensland p. 170 spp. n., JORDAN t.c.

*Gulamentus signatus* sp. n. Congo p. 221, JORDAN t.c.

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*Mucronianus tenuicornis* Riouw Is. p. 216, *gerrhus* Assam, *ellipticus*, *axius* Borneo spp. n. p. 217, JORDAN t.c.

*Nerthomma dorsalis* sp. n. Borneo p. 181, JORDAN t.c.

*Nessiara histrio* var. n. *tessellata*, *apicalis* sp. n. Philippines p. 16, HELLER Stett. ent. Zg. 84.

*Paraphloeobius sodalis* sp. n. Borneo p. 180, JORDAN Nov. Zool. 30.

*Phaulimia dissensa* sp. n. S. India p. 172, JORDAN t.c.

*Phloeobius stenus* sp. n. Shanghai p. 172, JORDAN t.c.

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*Xenocerus lacrimosus* p. 14, *sibuyanus* p. 15, *vinosus* p. 16 spp. n. Sibuyan Island, *humeralis* subsp. n. *philippensis* Mindanao p. 15, HELLER Stett. ent. Ztg. 84.

*Xylinades vicinus* sp. n. Borneo p. 172, JORDAN Nov. Zool. 30.

## PRIONIDAE.

*Aegosoma scabriceps*, notes on, p. 26, BARBEY Bull. Soc. Sci. nat. Lausanne 54.

## CERAMBYCIDAE.

Classification and biology of N. American Cerambycid larvae, CRAIGHEAD Canada Dept. Agric. Bull. 23, 238 pp. (fig.).

Notes on Chilean Longicorns, pp. 495–501 (fig.), PORTER Rev. chil. Hist. nat. 25.

*Aeolesthes rufimembbris* sp. n. Tonkin p. 8, PIC Échange 39.

*Anaesthetobrium* gen. n. *luteipenne* sp. n. Shanghai p. 20, PIC Mél. Exot. Ent. 40.

*Anubis viridis* sp. n. Laos p. 9, PIC Mél. Exot. Ent. 39.

*Callichroma clypeatum* Venezuela p. 256, *flachi* St. Catharina p. 257, *pseudovittatum* Esp. Santo p. 258 spp. n., SCHWARZER D. ent. Zs. 1923.—*C. gisteli* sp. n. (= *Pallene sericea* Gistel (nec F.)) p. 276, SCHMIDT D. ent. Zs. 1923.

*Capnolymma sulcaticeps* sp. n. Laos p. 12, PIC Mél. Exot. Ent. 38.

*Chloridolum talaoerensis* sp. n. Talaur Island p. 256, SCHWARZER D. ent. Zs. 1923.

*Chlorophorus ruficolor* sp. n. East Indies, *notabilis* var. *semiobliteratus* nom. nov. for *n. oblitteratus* p. 11, PIC Mél. Exot. Ent. 39.

*Chorotysce abdominalis* sp. n. Rhodesia p. 256, SCHWARZER D. ent. Zs. 1923.

*Clytanthus varius* var. n. *fontanae* Switzerland p. 141, HUBENTHAL Ent. Blätter 19.

*Cnemoplites (Hermerius) intermedia* sp. n. N. S. Wales p. 132, WILSON Proc. R. Soc. Vict. 35.

*Compsocerus*, key to species, *bicoloricornis* sp. n. Brazil p. 258, SCHWARZER D. ent. Zs. 1923.

*Demonax rubricollis, salvazai* Laos p. 10, *chapaensis* spp. n. Tonkin p. 11, PIC Mél. Exot. Ent. 39.

*Dere philippinensis* sp. n. Mindanao p. 420, HELLER D. ent. Zs. 1923.

*Derolus griseonotatus, blaisei* spp. n. Tonkin p. 8, PIC Mél. Exot. Ent. 39.

*Distenia heterotarsalis* sp. n. Philippines p. 34, HELLER Tijdschr. Ent. 66.—*D. bougainvilleana* sp. n. Bougainville p. 255, SCHWARZER D. ent. Zs. 1923.

*Doliops frosti* sp. n. Philippines fig. p. 598, SCHULTZE Phil. J. Sci. 23.—*D. basilana* p. 45 (fig.), xii.-punctata p. 46 (fig.) spp. n. Philippines, HELLER Tijdschr. Ent. 66.

*Elaptus pilosicollis* sp. n. W. Australia p. 131, WILSON Proc. R. Soc. Vict. 35.

*Ephies laosensis* p. 12, *gracilicornis* spp. n. Laos p. 13, PIC Mél. Exot. Ent. 38.

*Eulitoclonius* gen. n. (Callichromini) p. 273, *litomecooides* sp. n. p. 274 New Cameroons, SCHMIDT D. ent. Zs. 1923.

*Falsoibidium trimaculatum* sp. n. Cambodia p. 14, PIC Mél. Exot. Ent. 38.

*Falsoxoanodera* gen. n. (near *Xoanodera*) *maculata* sp. n. Laos p. 8, PIC Échange 39.

*Gibbocerbyx* gen. n. (near *Trachylophus* Gah.) *aureovittatus* sp. n. Tonkin p. 12, PIC t.c.

*Haplocerbyx minor* sp. n. Tonkin p. 8, PIC Échange 39.

*Helymaeus testaceiventris* subsp. n. *rufescens* Tanganyika Territory p. 275, SCHMIDT D. ent. Zs. 1923.

*Hesperophanes*, key to species p. 67, *heydeni* sp. n. Syr-Darya p. 66, BAECKMANN Rev. russe Ent. 18.

*Hospes obscurus* sp. n. Tanganyika Terr. p. 272, SCHMIDT D. ent. Zs. 1923.

*Lamellocerbyx* gen. n. (near *Imbrius* Pasc.) *laosensis* sp. n. Laos p. 8, PIC Échange 39.

*Laomargites* gen. n. (near *Margites*) *singularis* sp. n. Laos p. 8, PIC t.c.

*Leptura viridipennis* sp. n. Tonkin p. 12, PIC Mél. Exot. Ent. 38.

*Lesia* gen. n. (Tmesisternini) *bilunata* sp. n. New Guinea p. 282, KRIESCHE D. ent. Zs. 1923.

*Margites auratonotatus* sp. n. China p. 7, PIC Échange 39.

†*Mesothoris quadripartita* p. 60, *tenuicathrata, grandis* p. 61 spp. n. Mesozoic Queensland (figs.), TILLYARD Publ. Queensl. Geol. Surv. 273.

*Methia fischeri* sp. n. Brazil p. 531 (fig.), MELZER Rev. Mus. Paul. 13.

*Mimovesperus* gen. n. (near *Sagitta* Esch.) *pilosus* sp. n. Egypt p. 10, PIC Échange 39.

*Necydalis acutipennis* sp. n. California p. 51, key p. 52, VAN DYKE Bull. Brooklyn Ent. Soc. 18.

*Neocerbyx stötzneri* sp. n. China p. 72 (fig.), HELLER Ent. Blätter 19.—*N. vitalisi* sp. n. Indo-China p. 12, PIC Échange 39.

*Neorygocera* n.n. for *Orygocera* Schmidt (nec Walsingham) p. 72, HEDICKE D. ent. Zs. 1923.

*Obrium cephalotes* sp. n. China p. 7, PIC Échange 39.

*Ocalemia viridescens* sp. n. Laos p. 12, PIC Mél. Exot. Ent. 38.

*Orygocera* Schmidt see *Neorygocera*.

*Pachydissus rufipennis* sp. n. Laos p. 8, PIC Échange 39.—*P. argentatus* sp. n. Thibet p. 8, PIC Mél. Exot. Ent. 39.

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*Paracyltus multimaculatus* sp. n. Laos p. 12, PIC Échange 39.

*Parastrangalis atrimembris* sp. n.  
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*Protaxis bicoloripes* sp. n. Tonkin p.  
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*trinotata* East Indies spp. n. p. 10, PIC  
Mél. Exot. Ent. 39.

*Rhathymoscelis melzeri* sp. n. Brazil  
p. 22, DA COSTA LIMA Bol. Soc. ent.  
Brazil 1922.

*Rhondia placida* sp. n. China p. 72,  
HELLER Ent. Blätter 19.

*Rhopalomeces incisus* sp. n. Tanganika  
Terr. p. 275, SCHMIDT D. ent. Zs.  
1923.

*Rosalia alpina* forms of, p. 148 (figs.),  
DUDICH Arch. Natg. Abt. A 89 Heft 3.

*Semanotus cupressi* sp. n. California  
p. 48, VAN DYKE Bull. Brooklyn Ent.  
Soc. 18.

*Sternoplistes spectabilis bifunctus*  
Japan, *temmincki similis* China p. 8,  
varr. n., PIC Mél. Exot. Ent. 39.

*Strangalina bisbilineata* sp. n. Tonkin  
p. 12, PIC Mél. Exot. Ent. 38.

†*Willcoxia* gen. n. *magnopunctata*  
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TILLYARD Publ. Queensl. Geol. Surv.  
273.

*Xylotrechus multimaculatus* sp. n.  
Laos p. 9, PIC Mél. Exot. Ent. 39.

#### LAMIIDAE.

Catalogue of Lamiinae pt. 2, pp. 323–  
704, AURIVILLIUS Col. Cat. Junk &  
Schenkling.

*Achthophora costulata* sp. n. Isl.  
Sibuyan p. 416, HELLER D. ent. Zs.  
1923.

*Aerenea apicalis* p. 5, *subnuda* p. 6,  
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Not. prel. Rev. Mus. Paul. 2 no. 5.

*Agelasta*, key to Philippine,  
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Mitt. 12.—*A. lactospreta* sp. n. Isl.  
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*Agnia incasta* sp. n. Philippines p. 35  
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*Anameromorpha* gen. n., *unicolor*  
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Mél. Exot. Ent. 40.

*Anoplophora mamaea* p. 596, *tianaca*,  
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SCHULTZE Phil. J. Sci. 23.

*Apriona bicolor* Tonkin, *elsa* Sunda  
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KRIESCHE Arch. Naturg. 85 A 5 1920.

*Asaperda regularis* sp. n. Japan p. 21  
PIC t.c.

*Atossa subspectularis* sp. n. Borneo  
p. 41 (fig.), HELLER Tijdschr. Ent. 66.

*Batocera laena gracilis* Key Is., and  
papuana New Guinea p. 192, *leonina*  
*luzonica* subsp. n. p. 193, KRIESCHE  
Arch. Naturg. 85 A 5 1920.

*Cacia hieroglyphica, columbugana*  
spp. n. (fig.) Philippines p. 36, HELLER  
Tijdschr. Ent. 66.—*C.*, key to species  
p. 21, *intermedia* p. 18, *lacrimosa*,  
*nigro-abdominalis* p. 19, *verniculata*,  
*butuana* p. 20 Mindanao, *bioculata*,  
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Ent. Zs. 1923 p. 419 footnote) p. 19,  
*sibuyana*, *rosacea* p. 20 Isl. Sibuyan  
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for *parumspreta* sp. n. (vide Stettin. ent.  
Zg. 84 1923 p. 23) p. 419, HELLER D.  
ent. Zs. 1923.

*Capitocrassus* gen. n. *castaneus* sp. n.  
Sumatra p. 97, fig., VAN ECKE Zool.  
Med. Leiden 6 1921.

*Ceroplesia*, key to spp. p. 163,  
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*Choeromorpha*, key to Philippine p. 208, *subviolacea* p. 209, *panagensis* p. 210 spp. n. Philippines, HELLER Ent. Mitt. 12.

*Chreonaoma rufiscapus* sp. n. Philippines p. 47, HELLER Tijdschr. Ent. 66.—*C. violaceoapicalis* sp. n. Tonkin p. 14, PIC Mél. Exot. Ent. 38.

*Chydaeopsis luzonica* sp. n. Luzon p. 424, HELLER D. ent. Zs. 1923.

*Crossotus (Crossotides) heimschi* sp. n. Sahara p. 318, PEYERIMHOFF Bull. Soc. ent. Fr. 1922.

*Dorcadion arenarium*, key to forms p. 36, abb. n. *istrianum* p. 38, *liburnicum* p. 39, *mülleri* p. 40 N. Adriatic coast, DEPOLI Boll. Soc. Adriat. 26 1912 2.—*D. pelionense* p. 145 Thessaly, *maderi* p. 147 Albania spp. n., BREIT Wiener Ent. Ztg. 40.—*D. valonense* sp. n. Albania p. 145, APFELBECK in BREIT, Wiener Ent. Ztg. 40.

*Elaeis detzneri* p. 283, *augustana* p. 284 spp. n. New Guinea, KRIESCHE D. ent. Zs. 1923.

*Elelea multipunctata* sp. n. Borneo p. 415, HELLER t.c.

*Euclea opulenta* sp. n. Philippines p. 42 (fig.), HELLER Tijdschr. Ent. 66.

*Gibbanamera* gen. n. *rubra* sp. n. Tonkin p. 20, PIC Mél. Exot. Ent. 40.

*Glenea fortunei* var. n. *savioi* Shanghai p. 21, PIC t.c.

*Goes tessellatus* bionomics, BROOKS J. Agric. Res. 26 pp. 313–317 3 pls.

*Heteroclytomorpha quadripunctata* sp. n. Philippines p. 40, HELLER Tijdschr. Ent. 66.

*Ichthyodes biguttata* ab. n. *interruptolineata* Philippines p. 422, HELLER D. ent. Zs. 1923.

*Lamprobityle* gen. n. (Ptericoptini) *magnifica* sp. n. Luzon p. 420, HELLER t.c.

*Linda*, key to species, *nigriventris* sp. n. China p. 74, HELLER Ent. Blätter 19.—*L. rubripennis* sp. n. Laos p. 14, PIC Mél. Exot. Ent. 38.

*Megalobrimus lettow-vorbecki* sp. n. Tanganyika Terr. p. 430, KRIESCHE D. ent. Zs. 1923.

*Micromulciber albosetosus* sp. n. Borneo p. 40 (fig.), HELLER Tijdschr. Ent. 66.

*Milothriss hepaticolor* sp. n. Philippines p. 422, HELLER t.c.

*Mispila albopunctulata* Philippines, *apicalis* Borneo spp. n. p. 424, HELLER D. ent. Zs. 1923.

*Oberea nonfriedi* p. 14, *semiargentata*, *maculativentris*, *semisericea* China, *diversicornis*, *gracilior* p. 15, *lacana* Tonkin p. 16, *laosensis* spp. n. Laos p. 15, PIC Mél. Exot. Ent. 38.—*O. angustata* Tonkin, *diversimembris*, *bicoloritarsis* p. 11, *robustior* China, *birhana*, *rufotestacea* Tonkin, *hanoiensis* Hanoi spp. p. 12, PIC op. cit. 39.—*O. diversicornis* var. n. *rufonotaticeps* Shanghai p. 21, PIC op. cit. 40.

*Olenecamptus*, key to Philippine p. 39, *circulifer* p. 37, *tagalus* spp. n., *oplatus* subsp. n. *vittaticollis* Philippines, *sandacanus* sp. n. Borneo p. 38 (fig.), HELLER Tijdschr. Ent. 66.—*O. clarus* var. n. *subobliteratus* China p. 19, PIC Mél. Exot. Ent. 40.

*Oncideres bondari* sp. n. Brazil p. 7, MELZER Not. prel. Rev. Mus. Paul. 2 no. 5.

*Orinoeme surigaonis* sp. n. Philippines p. 423, HELLER D. ent. Zs. 1923.

*Otarionomus invirgatus* sp. n. Borneo p. 34, HELLER Tijdschr. Ent. 66.

*Pachypeza septenaria* sp. n. Philippines p. 421, HELLER D. ent. Zs. 1923.

*Paradiexia* gen. n. near *Lychrosis* p. 43, *pellita* sp. n. p. 44 Philippines, HELLER Tijdschr. Ent. 66.

*Phelipara breviscaposa* sp. n. China p. 73, HELLER Ent. Blätter 19.

*Planodes xenoceroides* sp. n. Philippines p. 18, HELLER Stett. ent. Zg. 84.—  
*P. granulatocostatus* sp. n. Philippines p. 415, HELLER D. ent. Zs. 1923.

*Potemnemus detzneri* p. 428, *sepicanus* spp. n., *rosenbergi* subsp. n. *ferrugineus* p. 429 New Guinea, KRIESCHE D. ent. Zs. 1923.

*Protilema montanum* sp. n. New Guinea p. 426, KRIESCHE D. ent. Zs. 1923.

*Protilemoides* gen. n. (Dorcadionini) p. 426, *birgersi* sp. n. p. 427 New Guinea, KRIESCHE D. ent. Zs. 1923.

*Pseudopocragyes* gen. n. *maculatus* spp. n. Laos p. 20, PIC Mél. Exot. Ent. 40.

*Pterichthya brasiliensis* sp. n. Brazil p. 4, MELZER Not. prel. Rev. Mus. Paul. 4 no. 5.

*Rondibilis parvula* sp. n. Philippines p. 421, HELLER D. ent. Zs. 1923.

*Rosenbergia bismarkiana* p. 196, *neopommerania* New Britain, *papuana* Solomon Is. p. 197 spp. n., KRIESCHE Arch. Naturg. 85 A 5 1920.

*Saperda shoemakeri* sp. n. Catskill Mts. N. Y. p. 97, DAVIS Bull. Brooklyn Ent. Soc. 18.

*Sepicana* gen. n. (Tmesisternini) p. 285, *vespertilio* p. 286 sp. n. New Guinea, KRIESCHE D. ent. Zs. 1923.

*Serixia atripennis* sp. n. Formosa p. 20, PIC Mél. Exot. Ent. 40.

*Sielia* gen. n. (Tmesisternini) *trigonocephala* sp. n. Philippines p. 414 (fig.), HELLER D. ent. Zs. 1923.

*Steirastoma genisspina* sp. n. Brazil p. 259, SCHWARZER D. ent. Zs. 1923.

*Stethopurma zikani* sp. n. Brazil p. 8, MELZER Not. prel. Rev. Mus. Paul. 2 no. 5.

*Styodus gazellae* sp. n. New Mecklenburg p. 425, KRIESCHE D. ent. Zs. 1923.

*Thermistis apicalis* sp. n. Tonkin p. 14, PIC Mél. Exot. Ent. 38.

*Zaeera detzneri, ramuana* spp. n. New Guinea, p. 337, KRIESCHE D. ent. Zs. 1923.

## XI. *Insecta*.

### BRUCHIDAE.

The function of the prothoracic plate in Bruchid larvae, 47 pp. (fig.), KUNHI KANNAN Mysore Dept. Agric. Ent. Ser. Bull. 7.

*Bruchus (Bruchidius) alfieri* sp. n. Egypt p. 104, PIC Bull. Soc. R. ent. Egypte 1922.—*B. quadrimaculatus*, biology, LARSON & SIMMONS J. Agric. Res. 26 pp. 609–616.—*B. multialbonotatus* Brazil, *tsinensis, senensis* China spp. n. p. 14, PIC Mél. Exot. Ent. 40.

*Pseudopachymerus 4-dentatus* Shanghai, *alboscutus, gounellei* spp. n. Brazil p. 15, PIC t.c.

### DONACIIDAE.

*Donacia*, specific characters, ISCHREYTT Zool. Anz. 58 pp. 36–43.

### MEGALOPIDAE.

Synonymy in the Megalopidae, p. 133, BRYANT Ann. Mag. N. H. (9) 12.

*Colobaspis pulcherrima* p. 605, *formosana* p. 606, *sauteri* p. 607 spp. n., key p. 608, Malaya REINECK D. ent. Zs. 1923.

*Kuilua ertli* sp. n. Angola p. 177, WEISE Arch. Natg. 83 A 4 1919.

*Leucastea fenestrata* Angola, *biformis* E. Africa p. 179, *femoralis* Angola p. 180, spp. n., WEISE t.c.

*Poecilomorpha pretiosa* sp. n. Formosa p. 609, REINECK D. ent. Zs. 1923.

*Sphondylia angolensis* p. 181, *varians* p. 182, spp. n. Angola, WEISE Arch. Natg. 83 A 4 1919.

*Temnaspis kunzeni* sp. n. Sumatra p. 610, REINECK D. ent. Zs. 1923.

### CRIOCERIDAE.

Synonymy in the Crioceridae, p. 131, BRYANT Ann. Mag. N. H. (9) 12.

*Crioceris gracilicornis* sp. n. Mindanao p. 143, PIC Bull. Soc. ent. Fr. 1923.—*C. luteohumeralis, rufometallicus* spp. n. Tonkin p. 10, PIC Mél. Exot. Ent. 38.—*C. obscuropagiata* ab. n. *inornata, exilis* sp. n. p. 2 Queensland, WEISE Ark. Zool. 15 no. 12.—*C. ertli* sp. n. Angola p. 174, WEISE Arch. Natg. 83 A 4 1919.

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#### CASSIDIDAE.

*Aspidomorpha extumida* sp. n. p. 127, *madagascariaca* subsp. n. *fugax* p. 128 Madagascar, SPAETH Ges. Luxemb. Naturf. Festschrift 1915.—*A. obsoleta* sp. n. Africa p. 204, WEISE Arch. Natg. 83 A 4 1919.

*Batonota*, classification pp. 65–76, *hastifera* sp. n. p. 71 Brazil, Colombia, *incapabilis* p. 72 Brazil, *electa* Peru, *collucens* Bolivia p. 74, *incallida* Brazil p. 75 spp. n., SPAETH Wiener ent. Ztg. 40.

*Cassida helva* p. (137) Siberia, Japan, *jacobsoni* p. (138) China, *ovalis* p. (143) Algeria spp. n., SPAETH Verh. zool.-bot. Ges. Wien 64 1914.—*C. collucens* p. 128, *ferranti* p. 129, *bicallosa* p. 130, *prospera* p. 132, *varicolor* p. 133, *circumsepta* p. 134, *consobrina* p. 135, *laetabilis* p. 136, *trossula* p. 137, *tenax* p. 138, *pusio* p. 139,

*sanguineoquittata* p. 140, *agites, mariae-*  
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 p. 152, *rudicollis* 153 spp. n. Madagascar.  
 SPAETH Ges. Luxemb. Naturf. Fest-  
 schrift 1915.—*C. rati* p. 605 (fig.),  
*manipuria* p. 606 (fig.), *dimbakar* spp. n.  
 India p. 607 (fig.), MAULIK Proc. Zool.  
 Soc. 1923.—*C. circumcincta* p. 204,  
*ertli* p. 205, spp. n. E. Africa, WEISE  
 Arch. Natg. 83 A 4 1919.

*Coptocycla lepida* sp. n. China p. (145),  
 SPAETH Verh. zool.-bot. Ges. Wien 64  
 1914.

*Hoplionota ertli* sp. n. Angola p. 203,  
 WEISE Arch. Natg. 83 A 4 1919.—*H. kuntzeni* W. Africa p. 293, *sauteri*  
 Borneo, *horni* Ceylon p. 295, *braueri*  
 Philippines p. 298 spp. n., SPAETH Verh.  
 zool.-bot. Ges. Wien 64 1914.

*Ischyronota schusteri* sp. n. Trans-  
 caspia p. (144), SPAETH t.c.

*Kari* gen. n. *brunnea* sp. n. Palestine  
 p. 602 (fig.), MAULIK Proc. Zool. Soc.  
 pt. 3.

*Metriona tenella*, early stages, p. 256  
 (fig.), FRERS Physis 6.

*Paratrikona* gen. n. near *Batonota*  
 p. 66, SPAETH Wiener ent. Ztg. 40.

*Stenoprioptera* gen. n. near *Prioptera*,  
*tibetana* sp. n. Thibet p. (132), SPAETH  
 Verh. zool.-bot. Ges. Wien 64 1914.

#### STYLOPIDAE.

*Clypoxenos* gen. n. *americanus* sp. n.  
 Bolivia p. 8, BRÈTHES Reprint from  
 Rev. Facultad Agron. La Plata 15.

*Montezumiaphila* gen. n. *vigili* sp. n.  
 Argentina p. 7, BRÈTHES t.c.

*Ophthalmochilus* (*Homilops*) *taschen-*  
*bergi* p. 9, *striata* p. 10, *fuliginosi* p. 11,  
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*argentinus* p. 14 Argentina, spp. n.,  
 BRÈTHES t.c.

*Paragioxenos* gen. n. *brachypterus* sp.  
 n. S. Australia p. 46 (figs.), OGLOBLIN  
 Bull. Sect. ent. Mus. Nat. Prague 1.

*Stylops obenbergeri* sp. n. Prague p. 45  
 (fig.), OGLOBLIN t.c.

*Xenos argentinus* p. 5, *bonariensis* p. 6  
 spp. n. Argentina, BRÈTHES t.c.

#### HYMENOPTERA.

Notes on the Fossiliferous Hymenoptera  
 of France, II & III, BERLAND Bull. Soc.  
 ent. Fr. 1923 pp. 171–175, & 287–288.

Biology of German Hymenoptera,  
 154 pp. (figs.), BISCHOFF Biol. Tiere  
 Deutschlands Teil 42.

Short account of British Hymenoptera,  
 BUCKHURST, STANILAND & WATSON  
 British Hymenoptera 1923 46 pp.  
 8 pls.

Albanian Hymenoptera, CSIKI Magyar  
 Tud. Akad. Balkan-kut. tud. ered. 1  
 pp. 140–142.

Aculeate Hymenoptera of British  
 Isles, FRISBY Proc. S. London Ent. & N.  
 H. Soc. 1920–21 pp. 1–11.

The cocoons of burrowing Hymenoptera  
 as a basis for their classification,  
 VUTCHETITCH Bull. Soc. ent. Moscou 2  
 No. 2 pp. xviii–xix.

#### Apoidea.

##### APIDAE (s.l.).

Revision of African parasitic bees,  
 with keys, p. 585, BISCHOFF D. ent. Zs.  
 1923.

Apidae from State of Amazonas,  
 Brazil, 6 pp., FRIESE Ark. Zool. 15 No.  
 13.

Habits and psychology of Honey-  
 bees, p. 1 (figs.), FRISCH Zool. Jahrb.  
 Abt. f. allg. Zool. 40.

Catalogue of Apidae subfam. Prosopti-  
 dinae, new names (figs.), MEADE-WALDO  
 Gen. Ins. fasc. 181 pp. 1–45.

Monograph of Sphecodinae, pp. 79–  
 242, MEYER Arch. Naturg. 85 A 1–2  
 1920.

Apidae of Finland, notes and syno-  
 nymy, pp. 112–155, FORSIUS & NORD-  
 STRÖM Not. ent. 3.

*Alcidamea producta* Cress., identity  
 of, p. 243, COCKERELL Ann. Mag. N. H.  
 (9) 12.

*Ammobatoides braunsi* sp. n. S. Africa  
 p. 602, BISCHOFF D. ent. Zs. 1923.

*Ancylotrochus melanostoma* sp. n. Lower  
 California p. 83, COCKERELL Proc. Cal.  
 Acad. Sci. 12.

*Andrena orizabibia* sp. n. Mexico p. 59, STRAND Arch. Natg. 83 A 11 1919.—*A. enslini* in Germany p. 63, ALFKEN Abh. natw. Ver. Bremen 25 1921.—*A. ephippium* var. *atrotectorialis* nom. n. for var. *macedonica* Friese (nec Strand) p. 431, HEDICKE D. ent. Zs. 1923.—*A. dobrowlanensis* sp. n. Poland p. 90, NOSKIEWICZ Polskie Pismo Ent. 2.—*A. murreensis* p. 264, *incanescens* p. 266 spp. n. Punjab, COCKERELL Ann. Mag. N. H. (9) 11.

*Anthidium (Proanthidium) transcaspicum* sp. n. (fig.) Transcaspia p. 137, LEBEDEV Rev. russe Ent. 18.—*A. sonorensis* sp. n. p. 91, with *productum* var. n. (? sp. n.) p. 92 California, COCKERELL Proc. Cal. Acad. Sci. 12.—*A. lituratum*, nests, p. 169, ENSLIN D. ent. Zs. 1923.

*Anthophora leucostomella*, *pachyodonta*, *xanthochlora* p. 80, *estebana* p. 81, *hololeuca* p. 82 spp. n. California, COCKERELL Proc. Cal. Acad. Sci. 12.—*A. (Anthemoëssa) rauii* sp. n. Missouri p. 100, ROHWER Proc. Ent. Soc. Wash. 25.

*Augochlora essequibensis* p. 445, *bodkinii* p. 444, *erubescens*, *barticana* p. 447, *semilaeta* p. 448 spp. n. Br. Guiana, COCKERELL Ann. Mag. N. H. (9) 11.—*A. (Oxystoglossa) dimissa* sp. n. Mexico p. 5, COCKERELL Proc. U. S. Nat. Mus. 63 art. 8.

*Bombus discrepans* p. 64, *tahanensis* p. 65, *rufoflavus* p. 66, *maxwelli* p. 67, spp. n. Malaya, PENDLEBURY J. F. M. S. Mus. 11.—*B. lucorum* f. n. *bischoffii* Brandenburg p. 632, MÜLLER D. ent. Zs. 1923.

*Centris*, biology of Chilean, pp. 345–350, HERBST Zs. wiss. Insektenbiol. 18.—*C. vanduzeei* p. 75, *rhodoleuca* spp. n., COCKERELLI subsp. n. *resoluta* p. 76, *pallida* subsp. n. *calognatha* p. 78, *tiburonensis*, *trichosoma* spp. n. p. 78 California, COCKERELL Proc. Cal. Acad. Sci. 12.

*Ceratina callosa*, biology, pp. 277–280, RABAUD Ann. Soc. ent. Fr. 91.

*Chalepogenus hypoleucus* p. 499, *leucostoma* p. 450 spp. n. Br. Guiana, COCKERELL Ann. Mag. N. H. (9) 11.

*Chalicodoma festae* sp. n. Cirenaica p. 3, GIBODO Boll. Mus. Zool. Anat. comp. Torino 36 No. 741 1921.

*Chloralictus* see *Halictus*.

*Coelioxys issororensis* sp. n., Br. Guiana p. 458, COCKERELL Ann. Mag. N. H. (9) 11.—*C. toltecoides* sp. n. Mexico p. 3, COCKERELL Proc. U. S. Nat. Mus. 63 art. 8.

*Colletes*, nests, MALYSHEV Rev. russe Ent. 18 pp. 103–124.

*Dasypoda argentata* ff. n. *spadix*, *griseithorax* Brandenburg p. 633, MÜLLER D. ent. Zs. 1923.

*Diadasia australis* subsp. n. *petrinus* California p. 84, COCKERELL Proc. Cal. Acad. Sci. 12.

*Dialictus*, key to N. American p. 193, *lionotus* Colorado p. 194, *stictaspis* New Mexico p. 195, spp. n., SANDHOUSE Canad. Ent. 55.

*Dianthidium (D.) platyurum*, *profugum* spp. n. California p. 90, COCKERELL Proc. Cal. Acad. Sci. 12.

*Epeolus fulviventris* Mt. Fongosi, *corniculatus* Lake Tanganyika, *rufothoracicus* Algoa Bay p. 600, *foveabilis* W. Transvaal, *bidens* Usambara, *glyptochilus* Transvaal, *coelostoma* Delagoa p. 601 spp. n., BISCHOFF D. ent. Zs. 1923.—*E. permixtus* sp. n. California p. 94, COCKERELL Proc. Cal. Acad. Sci. 12.

*Exomalopsis pulchella* subsp. n. *arida* Lower California p. 83, COCKERELL Proc. Cal. Acad. Sci. 12.

*Halictus sanfrancisconis* sp. n. N. America p. 57, STRAND Arch. Natg. 83 A 11 1919.—*H. aeneidorsum* sp. n. Germany p. 87, ALFKEN Abh. natw. Ver. Bremen 25 1921.—*H.* (subgen. *Chloralictus*) key to S. American p. 383, *H. (C.) spinolae* Reed redescribed p. 384, SANDHOUSE J. Wash. Acad. Sci. 13.—*H. rufibasis* p. 238, *hemichalceus*, *basilucens* spp. n. Queensland p. 238, key to these and allied spp. p. 240, COCKERELL Ann. Mag. N. H. (9) 12.—*H.*, Vachal's types of, redescribed with synonymy p. 292, *neuter* p. 235, *araxanus* p. 244, *longipes* p. 246, *laevidorsum* p. 257 Caucasus, *mordax* p. 236, *placidulus* p. 240, *pseudofallax* p. 268, *baigakumensis* p. 291, *stachii* p. 321, *laevifrons* p. 324, *acephalus* p. 326 Central Asia, *niveo-cinctus* C. and W. Asia p. 325, *mucidus* p. 237, *pseudosphecodimorphus* p. 285, *indefinitus* p. 313, *transcaspicus* p. 314, *ashabadiensis* p. 328 W. Asia, *ochropus*

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†*Heriades mersatus* sp. n. Florida Miocene p. 271, COCKERELL Ent. News 34.

*Hoplitis gracieae* sp. n. Colorado p. 263, COCKERELL Ann. Mag. N. H. (9) 11.

*Lestis bombylans*, biology, p. 21, McKEOWN Austr. Nat. 4 1918.

*Megachile pseudolatimanus* p. 65, *tuala* p. 66, spp. n. Arizona, STRAND Arch. Natg. 83 A 11 1919.—*M. chrysophaea*, notes, BREWSTER Austr. Nat. 4 1920 pp. 136–138.—*M. cockerelli* sp. n. Mexico p. 102, ROHWER Proc. Ent. Soc. Wash. 25.—*M. alpestris* sp. n. Chile p. 57, FRIESE Zs. wiss. Insektenbiol. 18.—*M. bodkini* p. 452, *botanicorum* p. 453, *pulchriventris* p. 454, *hamatipes* p. 455, *melanopoda* p. 456, *mutaticeps* p. 457 spp. n. Br. Guiana, COCKERELL Ann. Mag. N. H. (9) 11.—*M.*, notes on some of Cameron's spp., pp. 244 & 245, ID. op. cit. 12.—*M. alopecura* sp. n. Mexico p. 2, COCKERELL Proc. U. S. Nat. Mus. 63 art. 8.

*Megalopta vigilans* sp. n. Caribbean Coast p. 1 (fig.), COCKERELL Amer. Mus.

Novit. 66.—*M. tacarunensis* sp. n. Br. Guiana p. 444, COCKERELL Ann. Mag. N. H. (9) 11.

*Melecta luctuosa* var. n. *taormina* p. 61, (with ff. n. *lentina*, *tibiotinctata* p. 62), STRAND Arch. Natg. 83 A 11 1919.

*Melissodes communis* subsp. n. *gratior* p. 85, *catalinensis* subsp. n. *vanduzeei* p. 86, *calliphila* sp. n. with subsp. n. *nanula* p. 87, *idonea* sp. n. p. 88 California, COCKERELL Proc. Cal. Acad. Sci. 12.

*Morgania histrio* subsp. n. *transvaalensis* p. 587, *nigritulus*, *rotundiceps* p. 588 *rhodesianus*, *fulviventris* p. 590, *apicalis* p. 591 spp. n. S. Africa, BISCHOFF D. ent. Zs. 1923.

*Nomada italica* D. Torr. et Friese (= *festiva* Schmdkn.) Brandenburg p. 632, MÜLLER D. ent. Zs. 1923.

*Nomiooides festae* sp. n. Cirenaica p. 4, GIBBON Boll. Mus. Zool. Anat. comp. Torino 36 No. 741 1921.

*Osmia taorminaensis* Sicily p. 63, *zulu* Zululand p. 64, spp. n., STRAND Arch. Natg. 83 A 11 1919.—*O. holochlora* sp. n. Colorado p. 205, COCKERELL Canad. Ent. 55.—*O. alticola* sp. n. France p. 323, BENOIT Bull. Soc. ent. Fr. 1922.—*O. pentstemonis*, gynandromorph, p. 569, SANDHOUSE Amer. Nat. 57.

*Panurginus leucopterus* sp. n. Colorado p. 49, COCKERELL Ent. News 34.

*Parasphecodes* monograph pp. 112–137, *insignis* p. 123, *minimus*, *punctatissimus* (with var. n. *niveatus*) p. 131, *grandis*, *nigritus* p. 135 spp. n. Tasmania, MEYER Arch. Naturg. 85 A 10 1920.

*Pasitomachthes* gen. n. *nigerrimus* Durban p. 596, *bicolor* Antananarivo p. 597 spp. n., BISCHOFF D. ent. Zs. 1923.

*Perdita exclamens* subsp. n. *atra-* *mentata* p. 96, *vanduzeei* p. 97, *clarifacies*, *vittata* p. 98, *erudita* p. 99 spp. n. California, COCKERELL Proc. Cal. Acad. Sci. 12.—*P. minima* sp. n. Arizona p. 4 (fig.), COCKERELL Amer. Mus. Novit. 66.

*Phiarus rubescens* sp. n. Smyrna p. 294, BISCHOFF D. ent. Zs. 1923.

*Pseudodichroa* gen. n. p. 595, *fumi-* *pennis* sp. n. locality doubtful p. 596, BISCHOFF D. ent. Zs. 1923.

*Psithyrus vestalis* var. n. *sorgonis* Sicily p. 68, STRAND Arch. Natg. 83 A 11 1919.

*Ptiloglossa ducalis* subsp. n. *lucer-narum* Br. Guiana p. 442, COCKERELL Ann. Mag. N. H. (9) 11.

*Sphecodes strandi* Formosa p. 106, *caspicus* Caspian shore p. 113, *smyrnensis* Smyrna p. 116, *laticeps* Formosa, *tenuis* Transcaspia p. 121, *caucasicus* Caucasus p. 124, *quadratus* Germany, *cephalotes* Smyrna p. 129, *singularis* Serbia p. 130, *jörgensi* Brazil p. 199 spp. n., *kristensi* nom. n. for *abessinicus* Fr. p. 219, *gibbus* varr. n. *rufispinosus*, *turcestanicus* Turkestan p. 113, MEYER Arch. Natg. 85 A 1-2 1920.—S., notes on Hagen's types, p. 441, *barbatus* p. 497 Anatolia, *hungaricus* p. 498 Hungary, *intermedius* p. 500 Caucasus, *hirtellus* p. 502, *longuloides* p. 504, *coelebs* p. 505 Madrid, *conso-brinus* p. 507 Tripoli spp. n., BLÜTHGEN D. ent. Zs. 1923.—S. of Catalonia p. 123-126, CODINA Butl. Inst. Catalana Hist. nat. 3.—S., biology pp. 19-23, BLÜTHGEN Zts. wiss. Insektenbiol. 38.

*Sphecodopsis* gen. n. p. 593, *rufescens* p. 594 S. W. Africa, *algoensis* p. 595 Algoa Bay spp. n., BISCHOFF D. ent. Zs. 1923.

*Spinoliella scutellaris peninsularis* sp. n. [subsp. n. ?] Lower California p. 101, COCKERELL Proc. Cal. Acad. Sci. 12.

*Tetralonia chilensis* n.n. for *gayi* Spin. and *melaena* Spin. p. 184, HERBST Rev. chil. Hist. nat. 21 1917.

*Tetrapedia romani* sp. n. Brazil p. 3, FRIESE Ark. Zool. 15 No. 13.

*Triepeolus cyclurus* sp. n. Colorado p. 49, COCKERELL Ent. News 34.

*Trigona*, key to Malayan, p. 240, COCKERELL Ann. Mag. N. H. (9) 12.—*T. acapulconis* p. 70, *orizabaensis* p. 71, spp. n., STRAND Arch. Natg. 83 A 11 1919.

*Xenoglossa pruinosa* var. n. *lutzi* Colorado p. 205, COCKERELL Canad. Ent. 55.

*Xerophasma* gen. n. (Panurgidae) p. 1 *bequaerti* sp. n. Texas p. 2 (figs.), COCKERELL Amer. Mus. Novit. 66.

*Xylocopa dibongoana* nom. n. for *X. nigriceps* Friese p. 431, HEDICKE D. ent. Zs. 1923.

### Sphecoidea.

#### SPHEGIDAE.

Sphegidae of S. Africa, ARNOLD Ann. Transv. Mus. 9 pp. 143-253, 10 pp. 1-58 (figs.).

*Ammoplanus capensis*, sp. n., Cape Province, p. 58 (fig.), ARNOLD Ann. Transv. Mus. 10.

*Astata flavoundata*, sp. n., S. Africa, p. 38 (fig.), ARNOLD t.c.

*Atelosphex*, gen. n., p. 177, *misco-phoides*, sp. n., S. Africa, p. 178 (fig.), ARNOLD op. cit. 9.

*Belomicrus borealis* sp. n. Finland p. 65 (fig.), FORSIUS Not. ent. 3.

*Didineis stevensi* sp. n. p. 98 N. Dakota, ROHWER Proc. Ent. Soc. Wash. 25.

*Diodontus nitidus*, sp. n., Cape Province, p. 54, ARNOLD Ann. Transv. Mus. 10.—*D. penangensis* Penang p. 593, *dapitanensis* Mindanao p. 594, *antennatus* Singapore p. 595 spp. n., *scutatus* var. n. *borneensis* Borneo, var. n. *mindanaoensis* Mindanao p. 596, *sandakanensis* Borneo p. 597, *flicornis* p. 598, *davanus* p. 599, *ajaxellus* Philippines, *esuchus* Borneo p. 600, spp. n., ROHWER Philipp. J. Sci. 22.

*Diploplectron africanum*, sp. n. Rhodesia, p. 46 (fig.), ARNOLD Ann. Transv. Mus. 10.

*Epicrossocerus raui* sp. n. p. 99 Missouri, ROHWER Proc. Ent. Soc. Wash. 25.

*Larra bulawayoensis* r. n. *occidentalis*, Kamerun, *outeniqua*, *impressifrons*, spp. n. S. Africa, p. 224, ARNOLD Ann. Transv. Mus. 9.

*Microstigmus guianensis* p. 369 Br. Columbia, *brunniventris* p. 370 Paraguay, spp. n., ROHWER J. Wash. Acad. Sci. 13.

*Miscophus karroensis* p. 25, *stevensoni* p. 27 (fig.), *coeruleascens* p. 30, spp. n., S. Africa, ARNOLD Ann. Transv. Mus. 10.

*Nitela virginensis* sp. n. p. 100 Virginia, ROHWER Proc. Ent. Soc. Wash. 25.

*Notogonidea braunsi* p. 238, *bidentata* p. 240, *simulatrix*, *griseola* p. 246, *felina* p. 247, *angustiventris*, *misco-*

*phoides* p. 248, *minima* p. 249, *gracilicornis* p. 250 spp. n., *pompiliformis* r. n. *intermedia* p. 245 (figs.), S. Africa, ARNOLD Ann. Transv. Mus. 9.

*Nysson* (*Brachystegus*) *hoplisivora* sp. n. p. 96 Maryland, ROHWER Proc. Ent. Soc. Wash. 25.

*Palarus handlirschi* var. n. *nigrior*, Rhodesia p. 8, ARNOLD Ann. Transv. Mus. 10.

*Passaloecus brevicornis* life history p. 80 (figs.), BARBEY & FERRIÈRE Bull. Soc. Sci. nat. 55.

*Psen* (*Mimesa*) *bakeri* sp. n. Luzon p. 601, ROHWER Philipp. J. Sci. 22.

*Psenulus kohli*, sp. n., Rhodesia, p. 51 (fig.), ARNOLD Ann. Transv. Mus. 10.

*Saliostethus capicola*, sp. n., Cape-town, p. 34 (fig.), ARNOLD t.c.

*Solierella rhodesiana*, sp. n., Rhodesia, p. 23 (fig.), ARNOLD t.c.

*Sphecius speciosus*, habits, p. 569, SAVIN Nat. Hist. N.Y. 23.

*Sphecius pachysoma*, life history pp. 101–105, FAHRINGER Zts. wiss. Insektenbiol. 18.—*S. cyaniventris* in Chile pp. 579–581 (fig.), RUIZ P. Rev. chil. Hist. nat. 25.

*Spilomena merceti*, sp. n., Cape Province p. 57 (fig.), ARNOLD Ann. Transv. Mus. 10.

*Stigmus rugosifrons* sp. n., Rhodesia, p. 56 (fig.), ARNOLD t.c.—*S. fulvicornis* sp. n. Mississippi p. 370, ROHWER J. Wash. Acad. Sci. 13.—*S. fraternus* subsp. n. *raui* Missouri p. 100, ROHWER Proc. Ent. Soc. Wash. 25.

*Tachysphex diabolicus* p. 149, *braunsi* p. 150, *punctatiformis* p. 151, *bruneiceps* p. 153, *ambiguus* p. 156, *crassipes* p. 157, *barkeri* p. 158, *karroensis* p. 159, *minutulus* p. 160, *oberon*, *harpax* p. 161, *bituberculatus* p. 162, *titania* p. 163, *sipapomae* p. 164, *turneri* p. 165, *asimus* p. 166, *tuckeri* p. 172, spp. n., *panzeri* var. n. *aethiopicus* p. 167, *caliban*, *sycorax* p. 169, *dolosus* p. 171 (figs.), S. Africa, ARNOLD Ann. Transv. Mus. 9.—*T. dakotensis* sp. n. N. Dakota p. 98, ROHWER Proc. Ent. Soc. Wash. 25.

*Tachytes danae* nom. n. for *mira* Turn., p. 183, *sjöstedti* subsp. n.

*formosa* and *karroensis* p. 199, *lichtenburgenensis* p. 203, *turneri* p. 205, *cataractae* p. 208, *glabriuscula*, *punctuosa* p. 209, *confusa* p. 212, *melancholica* p. 214, spp. n., S. Africa, ARNOLD Ann. Transv. Mus. 9.—*T. distinctus* prey and nests, RAU Psyche 30 pp. 220–221.

#### PHILANTHIDAE.

*Philanthus consimilis* n.n. for *assimilis* Bks. Canad. Ent. 1919 p. 404, not Bull. Amer. Mus. N. H. 32 p. 422 1913, BANKS Canad. Ent. 55 p. 21.

#### CERCERIDAE.

*Apiratrix* subgen. n. see *Cerceris*.

*Cerceris* (*Apiratrix* subgen. n.), key to palaearctic species of subgenus p. 101, (A.) *superba* Andalusia p. 106, (A.) *pharetrigera* TjanDsin p. 108, (A.) *jacobsoni* Irkutsk (Siberia) p. 110, spp. n., SHESTAKOV Ann. Yaroslav Govt. Univ. 1923.—*C. salome*, *sayi* p. 21, *stevensi* p. 22, spp. n. U.S.A., BANKS Canad. Ent. 55.

#### BEMBICIDAE.

*Bembex handlirschella* ♀ and ♂ redescribed p. 189, ROTH Bull. Soc. Hist. nat. Afr. N. 14.—*B. hamata* sp. n. p. 6 (with subsp. n. *lucida* p. 7) California, FOX Psyche 30.

*Bicyrtes quadrifasciata*, life-history, SMITH Ann. Ent. Soc. Amer. 16 pp. 238–246.—*B. tristis* sp. n. Mexico p. 435, FOX Proc. Cal. Acad. Sci. 12.

*Steniola dissimilis* p. 429, *meridionalis* p. 430 spp. n. Mexico, FOX t.c.

*Stictiella bifurcata* sp. n. p. 431, *bifurcata* var. n. *albicera* p. 432, *directa* p. 433, *argentata* p. 434 spp. n. Mexico, FOX t.c.

#### Vespoidea.

BETHYLIDAE (including DRYINIDAE).

*Arysepyris niloticus* sp. n. Sudan p. 113, KIEFFER Ann. Soc. sci. Bruxelles 40 1921.

†*Calyosa longiceps* sp. n. from Baltic amber p. 336, BRUES Proc. Amer. Acad. Arts Sci. 58.

*Cephalonomia* life history p. xxvi, HAMM Proc. Ent. Soc. 1922.

†*Dryinus filicornis* sp. n. from Baltic amber p. 343, BRUES Proc. Amer. Acad. Arts Sci. 58.

*Epyris ebneri* p. 111, *aegyptius* p. 112 spp. n. Sudan, KIEFFER Ann. Soc. sci. Bruxelles 40 1921.—*E. bilineata* re-described pp. 115–116, HELLÉN Not. ent. 3.—†*E. inhabilis* sp. n. from Baltic amber p. 339, BRUES Proc. Amer. Acad. Arts Sci. 58.

*Goniozus claripennis* life history p. 906, VOUKASSOVITCH C.R. Acad. Sci. Paris 177.

†*Palaeobethylus* gen. n. *longicollis* sp. n. from Baltic amber p. 334 (fig.), BRUES Proc. Amer. Acad. Arts Sci. 58.

*Propristocera aegyptia* sp. n. Sudan p. 113, KIEFFER Ann. Soc. sci. Bruxelles 40 1921.

Prorops nasuta sp. n. (fig.) Uganda p. 113, WATERSTON Bull. Ent. Res. 14.

†*Protopristocera* gen. n. p. 337, *sucini* sp. n. p. 338 from Baltic amber, BRUES Proc. Amer. Acad. Arts Sci. 58.

*Sclerodermus pictiventris* sp. n. Sudan p. 114, KIEFFER Ann. Soc. sci. Bruxelles 40 1921.

†*Sierola*, key to species found in amber, *simplex* p. 340, *setigera* p. 341, *crastina* p. 342 spp. n. Baltic amber, BRUES Proc. Amer. Acad. Arts Sci. 58.

#### SCOLIIDAE.

*Scolia bifasciata*, mouthparts pp. 285–313 (fig.), BUGNION Mitt. schweiz. ent. Ges. 13.

*Trielis*, key to N. American females p. 22, BANKS Canad. Ent. 55.

#### MUTILLIDAE.

*Ctenotilla lobognatha* sp. n. Belgian Congo p. 252, BRADLEY & BEQUAERT Rev. zool. afr. 11.

*Dasylabris foxi* nom. n. for *Mutilla leda* Fox p. 254, BRADLEY & BEQUAERT t.c.

*Dasymutilla*, key to Minnesota species p. 101, *hirticula* p. 107, *permista* p. 108, spp. n. U.S.A., MICHEL 19th Rept. Minn. State Ent.—*D. welltonensis* sp. n. Arizona p. 1, BRADLEY & BEQUAERT Amer. Mus. Novit. 82.

*Dolichomutilla lessensis* sp. n. Belgian Congo p. 225, *guineensis* var. n. *voltensis* Fr. W. Africa p. 227, BRADLEY & BEQUAERT Rev. zool. afr. 11.

*Ephuta conchate* sp. n. Minnesota p. 111, MICHEL 19th Rept. Minn. State Ent.

*Mutilla (Pycnotilla) striata* p. 218, (*P.*) *albertvillensis*, *kigoma* p. 219 sp. n. Belgian Congo, BRADLEY & BEQUAERT Rev. zool. afr. 11.

*Odontomutilla maynei* p. 221, *callewaerti* p. 223 spp. n. Belgian Congo, BRADLEY & BEQUAERT t.c.

†*Protomutilla* gen. n. p. 142, *megalopthalma*, *incerta*, *castanea*, *succinicola* p. 143, *dentata*, *nana* p. 144 spp. n. Baltic amber, BISCHOFF Schr. physik. Ges. Königsberg 56 1916.

*Pseudomethoca*, key to Minnesota species p. 100, MICHEL 19th Rept. Minn. State Ent.

*Smicromyrme (Smicromyrme) zairensis* Belgian Congo p. 231, (*S.*) *bayeri* Kenya p. 232 spp. n., *tolerabilis* nom. n. for *bequaerti* Bischoff p. 233, (*Trogaspidia*) *degreefi* p. 237, (*T.*) *lukugensis* p. 238, (*Glossotilla*) *mukongo* p. 249, (*G.*) *maleiensis* p. 250 spp. n. Belgian Congo, BRADLEY & BEQUAERT Rev. zool. afr. 11.

*Squamulotilla ruwenzoriensis* p. 212, *kapiriensis* p. 214 spp. n. Belgian Congo, BRADLEY & BEQUAERT t.c.

*Stenomutilla dolichoderoides* p. 256, *bischoffi* p. 257 spp. n. Belgian Congo, BRADLEY & BEQUAERT t.c.

*Timula*, key to Minnesota species p. 111, MICHEL 19th Rept. Minn. State Ent.

#### THYNNIDAE.

*Agriomyia scyllias* sp. n. Australia p. 202 (fig.), MONTEL Rev. suisse Zool. 29 1922.

*Ariphron pauseris* sp. n. Sidney p. 197 (fig.), ID. t.c.

*Belothynnus unifasciatus* var. n. *niger* p. 220 (fig.), ID. t.c.

*Eirona brumalis* sp. n. p. 182 (fig.), var. n. *denticulus* p. 184 (fig.) Australia, ID. t.c.

*Elaphroptera quino* sp. n. Brazil p. 186 (fig.), ID. t.c.

*Eucyrtothynnus trezen* Brazil p. 189, *letreus* Argentina p. 192, *phyllis* Brazil p. 195, spp. n. (figs.), ID. t.c.

*Hemithynnus libes* sp. n. Australia p. 205 (fig.), ID. t.c.

*Lestricothynnus hegias* p. 213, *thoe* p. 216, *drosillus* p. 217 (figs.), spp. n. Australia, ID. t.c.

*Lophocheilus sylvanus* sp. n. Australia p. 209 (fig.), ID. t.c.

*Macrothynnus ioleius* sp. n. W. Australia p. 212 (fig.), ID. t.c.

*Phymatothynnus zenis* sp. n. Australia p. 200 (fig.), ID. t.c.

*Rhagigaster decembbris* p. 177, *thymetes* p. 179, spp. n. Australia, ID. t.c.

*Spilothynnus thalluse* sp. n. Australia, New Caledonia p. 184 (fig.), ID. t.c.

*Tachynothynnus mammeus* sp. n. S. Australia p. 221 (fig.), ID. t.c.

*Zaspilothonnus lasius* sp. n. N. S. Wales p. 223 (fig.), ID. t.c.

#### PSAMMOCHARIDAE (POMPILIDAE).

An introductory study of the Psammocharinae, REGAN Ann. Ent. Soc. Amer. **16** pp. 177-190 3 pls.

*Brethesia* nom. n. for *Pepsis* p. 2, LUCAS Arch. Natg. **83 A 5** 1919.

*Giganteopepsis* subgen. n. see *Pepsis*.

*Lophopompilus bengtssoni* sp. n. (fig.) U.S.A. p. 186, REGAN Ann. Ent. Soc. America **16**.

*Macromeris*, monograph pp. 132-162 (figs.), key to spp. p. 140, *palawanensis* Palawan Is. p. 142, *mindanaoensis* Mindanao p. 143, *fulgidipennis* New Guinea p. 151 spp. n., LUCAS Arch. Natg. **85 A 10** 1920.

*Pepsis amyntoides* p. 22, *eurydice* p. 23 Brazil, *balboae* p. 51, *herodes* p. 52, *dryas* p. 60, *amok* p. 66 Panama, *riojaneirensis* p. 67, *zelotarum* p. 69 Brazil, *mapiriensis* Bolivia p. 81, *körberi* p. 82, *inimicissima* p. 83, *debilitans* p. 84, *sepultrix* p. 86, *strickeri* p. 87 Brazil, *vinciens* Bolivia p. 88, *prudentopolitana* Brazil p. 99, *nemesis* p. 112, *anna*, *erdmuthae* p. 118, *lassonis* p. 121 Argentina, *curti* Panama p. 150,

*bang-haasi* Argentina p. 151, *parca* Brazil p. 152, spp. n., (*Giganteopepsis* subgen. n., type *Pepsis gigantea* Luc.) p. 41, *P. smaragdina* abb. n. *nebulosipennis* p. 75, *basifulgens* p. 78, *purpurea* p. 79, and var. n. *minor* p. 77, figs., LUCAS Arch. Natg. **83 A 5** 1919.

*Pompilus fazii* p. 148 (fig.), *jaffueli* p. 150 (fig.) Chile, HERBST Rev. chil. Hist. nat. **25**.

*Salius ferruginipennis* Hal. (= *bona-*  
*riensis* Lep.) p. 126 (fig.), BRÈTHES Rev.  
chil. Hist. nat. **27**.

#### EUMENIDAE.

*Amphimenes* subgen. n. see *Eumenes*.

*Eumenes* subgen. n. *Amphimenes*,  
type *totonacus* p. 53, BERTONI Rev. Soc.  
cient. Paraguay **1**.—*E. pomiformis*  
f. n. *insolata* Brandenburg p. 627,  
MÜLLER D. ent. Zs. 1923.—*E. conica*,  
nests p. 304, KHARE J. Bombay Nat.  
Hist. Soc. **29**.—*E. canaliculata* and  
*abdominalis* see *Zeteumenes* gen. n.

*Hoplopus laevipes* parasites of, p. 181,  
ENSLIN D. ent. Zs. 1923.

*Odynerus pedestris*, nesting habits p.  
243, RAU Ent. News **34**.—*O. (Ancistro-*  
*cerus) birenimaculatus* nests, JOHNSON  
Psyche **30** pp. 226-227.—*O. ebneri* sp. n.  
Sudan p. 286, SCHULTHESS Anz. Ak.  
Wiss. Wien **57** 1920.

*Stenancistrocerus saecularis*, nesting  
habits p. 243, RAU Ent. News **34**.

*Zeteumenes* gen. n. for *Eumenes cana-*  
*liculata* and *abdominalis* p. 11, WINKEL-  
RIED Rev. Soc. cient. Paraguay **1**.

#### MASARIDAE.

*Ceramiopsis paraguayensis* sp. n. p. 11,  
WINKELRIED Rev. Soc. cient. Paraguay  
**1**.

#### VESPIDAE.

Vespidae of Finland pp. 1-9, FORSIUS  
& NORDSTRÖM Not. ent. **3**.

*Clypeopolybia* gen. n. p. 15, *duckei*  
sp. n. p. 16 Bolivia, BRÈTHES Reprint  
from Rev. Facultad Agron. La Plata **15**.

*Nortonia sudanensis* sp. n. Sudan p.  
285, SCHULTHESS Anz. Ak. Wiss. Wien  
**57** 1920.

†*Palaeovespa relecta* sp. n. Colorado Miocene p. 270, COCKERELL Ent. News 34.

*Polistes* nests pp. 341–343, ISELY Kansas Univ. Sci. Bull. 14 1922.—*P. paraguayensis* sp. n. p. 12, WINKLER Rev. Soc. cient. Paraguay 1.—*P. pallipes*, vestigial pleometrosis pp. 73–80, BEQUAERT Bull. Brooklyn Ent. Soc. 18.

*Synagris*, revision of South and Central African p. 439, BEQUAERT Ann. S. Afr. Mus. 19.—*S. didieri* biology, VERLAINE Rev. zool. afr. 11 pp. 435–475 3 pls.

*Vespa*, specific difference in stigmata of larva, SEMICHON Bull. Soc. ent. Fr. 1923.—*V. media*, nest, p. 113 (figs.), LABITTE Ann. Sci. nat. (Zool.) (10) 6.

### Chrysoidea.

#### CHRYSIDIDAE.

*Chrysis ignita* early stages p. 103, MARECHAL Bull. Soc. ent. Belg. 5.

*Holopyga*, notes on pp. 13–15, INVREA Boll. Soc. ent. Ital. 15.

*Parnopes denticulatus* Spin. synonymy, p. 244, TRAUTMANN D. ent. Zs. 1923.

†*Protachrysis* gen. n. p. 139, *succinalis* sp. n. p. 141, figs., Baltic amber, BISCHOFF Schr. physik. Ges. Königsberg 56 1916.

*Pseudochrysis eos* sp. n. Mediterranean p. 243, TRAUTMANN D. ent. Zs. 1923.

### Formicoidea.

#### FORMICIDAE.

Hybrid ants, EMERY Rend. Acc. Sci. Bologna 21 1917 pp. 23–29.

Ants of Cocos Is., EMERY Rend. Acc. Sci. Bologna 23 1919 pp. 36–40.

Present geographical distribution of Formicidae from phylogenetic standpoint, pp. 357–450, EMERY Mem. Acc. Lincei Roma (5) 13 1920.

Revision of the Myrmicinae, pp. 207–397, EMERY Gen. Ins. 174c.

Remarks on C. Emery, Hymenoptera Fam. Formicidae in Genera Insectorum, FOREL Bull. Soc. Sci. nat. Lausanne 54 1921 pp. 205–207.

History of Turkestan Formicidae pp. 82–88, KUSNEZOW Zool. Anz. 57.

Morphology and classification of genera and species of Formicidae, pp. 65–76, MÜLLER Mem. Soc. ent. Ital. 2.

Orientations in ants, SANTSCHI Rev. zool. afr. 11 pp. 111–144; Id. Mém. Soc. vaud. Sci. nat. 1923 p. 137.

The strength of ants, p. 100, STEEL Austr. Nat. 4 1919.

The formation of new colonies by Formicidae, p. 95 (fig.), STUMPER Ann. Sci. nat. (Zool.) (10) 6.

Hungarian slave-making and parasitic ants, pp. 93–107 figs., SZABÓ Állatt. Közlem. 13 1914.

*Acanthoponera mucronata* var. n. *wagneri* p. 84, SANTSCHI Bull. Soc. Sci. nat. Lausanne 54.—*A. (Anacanthoponera subgen. n. p. 176) imbellis* var. n. *scabra*, *leae* sp. n. fig. p. 181 N.S.W., *brouni* subsp. n. *kirki* fig. N. Zealand p. 184, synonymy and distribution of American spp. p. 186, *goeldii* subsp. n. *schwarzi* Guatemala fig. p. 188, WHEELER Psyche 30.

*Acromyrmex moelleri panamensis* var. n. *ochraceola*, Rio de Janeiro, p. 97, FOREL Rev. suisse Zool. 30.—*A. iheringi* var. *tucumana*, ♀, p. 202, BRUCH Rev. Mus La Plata 26.

*Acropyga indistincta* sp. n. W. Australia p. 178, CRAWLEY Ent. Rec. 35.

*Aenictus deuereti* sp. n. N.S.W. p. 177, CRAWLEY t.c.

*Aeromyrma ugandana* sp. n. Uganda p. 279, SANTSCHI Rev. zool. afr. 11.

†*Agraecomyrmex* gen. n. Baltic amber (type *Myrmica duisburgi* Mayr) p. 56, *A. duisburgi* redescribed, figs., p. 57, WHEELER Schr. physik. Ges. Königsberg 55 1915.

*Anacanthoponera subgen. n.* see *Acanthoponera*.

*Anochetus schoutedeni* sp. n. p. 264 (with var. n. *ustus*), *pasteuri* sp. n. p. 265 Belgian Congo, SANTSCHI Rev. zool. afr. 11.

*Aphaenogaster pallida* subsp. n. *finzii* Dalmatia p. 47, MÜLLER Boll. Soc. Adriat. 27 2 1913.—*A. theryi* sp. n. p. 327 (fig.), *gibbosa* var. n. *nadigi* p. 328 Morocco, SANTSCHI Rev. suisse Zool. 30.

—*A. testaceo-pilosa, spinosa* var. *nitida*, habits pp. 351–356, STÄGER Zs. wiss. Insektenbiol. 18.—*A. lamellidens* var. n. *nigripes* Mississippi, Carolina p. 308, SMITH Ent. News 34.—*A. sardoa* var. n. *longispina* Algeria p. 42, *ovaticeps* ssp. n. *mulleriana* Trieste p. 44, WOLF Ber. Natw. Med. Ver. Innsbruck 35 1915.—†*A. oligocenica* p. 54, *mersa* p. 55 spp. n. Baltic amber, figs., WHEELER Schr. physik. Ges. Königsberg 55 1915.—†*A. berendti* Mayr belongs to *Stenamma* p. 53, WHEELER t.c.

*Apterostrigma luederwaldti* sp. n. Brazil p. 66, SANTSCHI Ann. Soc. ent. Belg. 63.—*A. bruchi* ♂ ♀ p. 204 (figs.), BRUCH Rev. Mus. La Plata 26.

†*Archimyrmex* gen. n. *rostratus* sp. n. Green River Eocene U.S.A. p. 51 (fig.), COCKERELL Entomologist 56.

†*Asymphylomyrmex* gen. n. p. 96, *balticus* sp. n. p. 97 Baltic amber, fig., WHEELER Schr. physik. Ges. Königsberg 55 1915.

*Atopomyrmex mocquerysi* var. n. *obscura* Ivory Coast and *arnoldi* Belgian Congo, st. n. *opaca* Angola p. 283, SANTSCHI Rev. zool. afr. 11.

*Aulacomyrma* subgen. n. see *Polyrhachis*.

*Azteca foveiceps* sp. n. Br. Guiana p. 163 (figs.), WHEELER Zoologica 3 1921.

*Bothriomyrmex meridionalis* var. n. *maroccanus* Morocco p. 335, SANTSCHI Rev. suisse Zool. 30.—*B. meridionalis* var. n. *corsica* p. 136 Corsica, SANTSCHI Bol. Soc. esp. Hist. nat. 23.

*Bothroponera tesserinoda* var. n. *sulcatotesserinoda* S. India p. 88, FOREL Rev. suisse Zool. 30.

*Brachymyrmex heeri* var. n. *basalis* Br. Guiana p. 166, WHEELER Zoologica 3 1921.—*B. modestus* sp. n. p. 271, *coactus* var. n. *robusta* p. 272 Brazil, SANTSCHI Rev. suisse Zool. 30.

*Calyptomyrmex piripilis* sp. n. Belgian Congo p. 282, SANTSCHI Rev. zool. afr. 11.

*Camponotus tergestinus* sp. n. Trieste p. 46, MÜLLER Boll. Soc. Adriat. 27 2 1913.—*C. reticulatus* race *sericellus* var. n. *rugosior* Sumatra p. 30, (*Myrmophyuma*) *walkeri* race *bardus* var. n.

*elongata* W. Australia p. 178, CRAWLEY Ent. Rec. 35.—*C. (Pseudocolobopsis) leptocephalus* ♀ p. 62 (fig.) Espiritu Santo (Brazil), EMERY Ent. Mitt. 12.—*C. maculatus* st. n. *ruzskjellus* Turkestan p. 98, *abdominalis* *stercorarius* var. n. *wagneri* Peru p. 99, *nicobarensis* *exiguoguttatus* var. n. *robbani* Burma p. 100, FOREL Rev. suisse Zool. 30.—*C. (Myrmoturba) holzi* sp. n. Ecuador p. 134, *nitens* var. n. *furmanni*, *C. (Myrmophincta) sexguttatus* var. n. *albotaeniolata* p. 135, FOREL Bull. Soc. Sci. nat. Lausanne 54 1921.—*C. (Neomyrmamblys) inca* st. n. *rector* Brazil p. 68, SANTSCHI Ann. Soc. ent. Belg. 63.—*C. (Myrmoturba) maculatus* st. *arnoldius* var. n. *georgei* Rhodesia fig. p. 290, *radamae* st. *becki* var. n. *altior* Madagascar, (*Dinomyrmex*) *lieugmei* var. n. *ugandensis* Uganda p. 292, SANTSCHI Rev. zool. afr. 11.—*C. punctulatus* *termitarius* var. n. *leucoxona* Brazil p. 273, *sylvaticus* st. *barbaricus* var. n. *gaetulus* Algeria p. 335, SANTSCHI Rev. suisse Zool. 30.—*C. (Colobopsis) mississippiensis* sp. n. p. 83, *pylartes* subsp. n. *fraxinicola* p. 86 Mississippi, SMITH Psyche 30.—*C. caryae* var. n. *essigi* California p. 306, SMITH Ent. News 34.—*C. pittieri* var. n. *poenalis* Br. Guiana p. 167, WHEELER Zoologica 3 1921.—*C. abdominalis* subsp. n. *romani*, *heathi* var. n. *gilvigaster* Brazil p. 5, WHEELER Ark. Zool. 15 no. 7.—†*C. mengei* Mayr redescribed, figs., p. 138, WHEELER Schr. physik. Ges. Königsberg 55 1915.

*Carebara incerta* sp. n. Brazil p. 66, SANTSCHI Ann. Soc. ent. Belg. 63.

*Catalaucus latissimus* var. n. *mimula* Borneo p. 210, MENOZZI Bull. Soc. ent. Fr. 1923.

*Cephalomorium* subgen. n. see *Tetramorium*.

*Cephalotes atratus quadridens* var. n. *dehnowi* America p. 97, FOREL Rev. suisse Zool. 30.

*Cerapachys reticulatus* sp. n. Formosa p. 60, EMERY Ent. Mitt. 12.—*C. lamborni* sp. n. Lake Nyasa p. 29, CRAWLEY Ent. Rec. 35.

*Cheliomyrmex morosus* st. n. *audax* Ecuador p. 92, SANTSCHI Bull. Soc. Sci. nat. Lausanne 54 1921.

*Cremastogaster longispina* st. n. nau-mannaec Ecuador p. 133, FOREL Bull. Soc. Sci. nat. Lausanne **54** 1921.—*C. (Orthocrema) delitescens* sp. n. Br. Guiana p. 152, WHEELER Zoologica **3** 1921.—*C. senegalensis* st. n. *goliathula* Angola p. 93, *fulmeki* sp. n. Sumatra p. 95, *ranavalona* var. n. *pepo* Madagascar p. 96, FOREL Rev. suisse Zool. **30**.—*C. kneri* st. amita var. n. *caffra* Transvaal p. 94, *brevispinosa sericea* var. n. *semisericea* Argentina p. 249, *curvispinosa* var. n. *kemali* Brazil p. 250, SANTSCHI Rev. suisse Zool. **30**.

*Cryptocerus varians* var. n. *jamaicensis* Jamaica p. 97, FOREL Rev. suisse Zool. **30**.

*Cyphomyrmex personatus* sp. n. Argentina p. 268, SANTSCHI Rev. suisse Zool. **30**.—*C. kirbyi* descr. of male p. 97, SANTSCHI Bull. Soc. Sci. nat. Lausanne **54** 1921.

*Dendromyrmex apicalis* var. n. *guyanensis* p. 101, *madeirensis* var. n. *melinoni* p. 102, *fabricii* st. n. *nitidior*, *marmorensis* st. n. *vestita*, p. 102, SANTSCHI Bull. Soc. Sci. nat. Lausanne **54**.—*D. fabricii* var. n. *pictus*, *madeirensis* var. n. *romani*, *apicalis* var. n. *opaciceps* p. 6 Brazil, WHEELER Ark. Zool. **15** no. 7.

*Diacamma bispinosum* st. n. *sauvassurei* Halmheira p. 89, *rugosum* r. *vagans* var. n. *andamana* Andaman Is. p. 90, FOREL Rev. suisse Zool. **30**.

†*Dimorphomyrmex mayri* sp. n. Baltic amber p. 106, *theryi* Emery redescribed p. 104, figs., WHEELER Schr. physik. Ges. Königsberg **55** 1915.

*Dinoponera grandis* st. *mutica* var. n. *quadriceps*, *opaca* p. 84, SANTSCHI Bull. Soc. Sci. nat. Lausanne **54** 1921.

*Diplomorium saharensis* sp. n. Central Sahara p. 278, SANTSCHI Rev. zool. afr. **11**.

*Dolichoderus gibbosus* var. n. *gibbosanalalis* S. America p. 98, FOREL Rev. suisse Zool. **30**.—*D. taschenbergi* var. *aterrimus*, habits, p. 247, LOGIER Canad. Ent. **55**.—*D. attelaboides* var. n. *pulla*, *imbecillus* var. n. *heterogaster*, *luederwaldti* st. n. *lujae* p. 269 Brazil, SANTSCHI Rev. suisse Zool. **30**.—*D. capitatus* sp. n. Fr. Guiana p. 99, *D. (Monacis) mucronifer* female descr., *D. (Hypoclinea) luederwaldti* sp. n. Brazil p. 100,

*bidens* var. n. *bahiana* p. 101, SANTSCHI Bull. Soc. Sci. nat. Lausanne **54** 1921. —†*D. passaloma* p. 79, *elegans* p. 80, *mesosternalis* p. 81, *vexillarius* p. 83 spp. n. Baltic amber, *balticus* p. 78, *sculpturatus* p. 84, *tertiarius* p. 85 redescribed, figs., WHEELER Schr. physik. Ges. Königsberg **55** 1915.

*Dorylus schoutedeni* fig. p. 267, *aggressor* p. 268, *D. (Anomma) titan* p. 271 spp. n. *kohli* var. n. *militaris* p. 274, *nigricans* var. n. *terrificus* p. 275 Belgian Congo, SANTSCHI Rev. zool. afr. **11**.—*D. nigricans* habits, p. xxxii, LOVERIDGE Proc. Ent. Soc. **1922**.

*Dorymyrmex morenoi* sp. n. Argentina p. 187 (fig.), BRUCH Rev. Mus. La Plata **26**.

†*Drymomyrmex* gen. n. p. 135, *fusci-pennis* p. 136, *claripennis* p. 138 spp. n. Baltic amber, figs., WHEELER Schr. physik. Ger. Königsberg **55** 1915.

*Eciton strobeli* ♀ 26 p. 175 (figs.), *praedator* ♀ 26 p. 181 (figs.), *dulcius* var. *jujuensis* ♀ 27 p. 172, BRUCH Rev. Mus. La Plata.—*E. coecum* var. n. *elsbethae* Colombia p. 91, FOREL Rev. suisse Zool. **30**.—*E. hamatum* var. n. *quitensis* p. 135, FOREL Bull. Soc. Sci. nat. Lausanne **54** 1921.—*E. amazona* sp. n. Brazil p. 68, SANTSCHI Ann. Soc. ent. Belg. **63**.—*E. latidens* var. n. *moralis* p. 1259, *emeryi* var. n. *exagona* p. 1261 Brazil, SANTSCHI Rev. Mus. Paul. **13**.—*E. ferox* p. 89, *bellicosum* p. 90, *integrum* p. 91, *E. (Acamathus) inca* p. 93, *colombi* p. 94, spp. n. S. America, *E. hamatum* var. n. *funesta* p. 89, *E. (Acamathus) laticapum* var. n. *nocua* p. 94, *emeryi* nom. n. for *d'orbignyi* Em. p. 92, SANTSCHI Bull. Soc. Sci. nat. Lausanne **54** 1921.—*E. fimbriatum* var. n. *interrupta* Brazil, *burchelli* st. n. *cupiens* Fr. Guiana p. 249, SANTSCHI Rev. suisse Zool. **30**.

*Ectatomma (Parectatomma) aculeatocoxae* sp. n. Fr. Guiana p. 82, *E. tuberculatum* var. n. *irregularis* p. 83, SANTSCHI Bull. Soc. Sci. nat. Lausanne **54**.—*E. concinnum* var. n. *romani* Brazil, p. 2, WHEELER Ark. Zool. **15** no. 7. —†*E. europaeum* Mayr ♂ described p. 33, WHEELER Schr. physik. Ges. Königsberg **55** 1915.

†*Electromyrmex* gen. n. (type *E. klebsi*) Baltic amber p. 55, WHEELER t.c.

†*Electroponera* gen. n. p. 34, *dubia* sp. n. p. 35 Baltic amber, figs., WHEELER t.c.

†*Enneamerus reticulatus* Mayr, figured p. 17, WHEELER t.c.

*Epitritus argiolus* var. n. *barbara* p. 136 Tunis, SANTSCHI Bol. Soc. esp. Hist. nat. 23.

†*Erebomyrma antiqua* Mayr, redescribed, figs., p. 46, WHEELER Schr. physik. Ges. Königsberg 55 1915.

*Eusphinctus* (*E.*) *occidentalis* p. 74, *E.* (*Nothosphinctus*) *fulvidus* p. 75, *silaceus* p. 77 spp. n. W. Australia figs., CLARK J. R. Soc. W. Aust. 9.

*Formica* (*Serviformica*) *obsidiana* ♀ Formosa p. 61, EMERY Ent. Mitt. 12.—*F. jacoti* sp. n. Peking, *rufibarbis* var. n. *orientalis* Shantung p. 4, WHEELER Amer. Mus. Novit. 69.—*F. exsecta* variation p. 46, WOLF Ber. Natw. Med. Ver. Innsbruck 35 1915.—†*Formica horrida* p. 125, *phaethusa* p. 126, *clymene* p. 127, *strangulata* p. 130 spp. n. Baltic amber, *flori* Mayr p. 125, *constricta* Mayr p. 128 redescribed, figs., WHEELER Schr. physik. Ges. Königsberg 55 1915.—†*F. eoptera* sp. n. Eocene, Texas, p. 399 (fig.), COCKERELL Amer. J. Sci. 5.

*Formicoxenus nitidulus*, polymorphism in, pp. 18–24, notes on biology, etc., pp. 73–82, STUMPER Bull. Soc. Nat. Luxembourg 28 1918.—*F. n.* habits pp. 290–292, STÄGER Zs. wiss. Insektenbiol. 18.

†*Gesomyrmex annectans* sp. n. Baltic amber p. 107, *hoernesi* Mayr redescribed p. 108, figs., WHEELER Schr. physik. Ges. Königsberg 55 1915.

†*Glaphyromyrnex* gen. n. p. 131, *oligocenicus* sp. n. Baltic amber p. 132, figs., WHEELER t.c.

*Gnampylogenys tortuolosa* var. n. *quitensis* p. 133, FOREL Bull. Soc. Sci. nat. Lausanne 54 1921.

*Harpagoxenus sublaevis*, notes on, MADER Ent. Anz. Vienna 3 1923 pp. 7–8.

*Holcoponera magnifica* sp. n. Brazil p. 81, SANTSCHI Bull. Soc. Sci. nat. Lausanne 54 1921.

*Iridomyrmex impotens* sp. n. p. 67, *humilis* st. *angulata* var. n. *pulex* p. 68, Brazil, SANTSCHI Ann. Soc. ent. Belg. 63.—†*I. samlanicus* p. 91, *oblongiceps* p. 93 spp. n. Baltic amber, *geinitzi* p. 86, *constrictus* p. 88, *gaeperti* p. 90 redescribed, figs., WHEELER Schr. physik. Ges. Königsberg 55 1915.

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†*Liometopum oligocenicum* sp. n. Baltic amber p. 95, fig., WHEELER t.c.

*Lordomyrma crawleyi* sp. n. fig. New Guinea p. 209, MENOZZI Bull. Soc. ent. Fr. 1923.

†*Macromischa prisca* E. André belongs to *Vollenhovia* p. 52, WHEELER Schr. physik. Ges. Königsberg 55 1915.

*Macromischoides aculeatus* var. n. *melanogyne* French Congo p. 285, SANTSCHI Rev. zool. afr. 11.

*Melophorus (Lasiophanes) pilosulus, uxorius* spp. n. Chili p. 93, list of and key to American spp. pp. 90-92, ÉMERY Rend. Acc. Sci. Bologna 26 1922.

*Mesoponera eleonorae* sp. n. Ecuador p. 131, FOREL Bull. Soc. Sci. nat. Lausanne 54 1921.

*Messor aciculatus* var. n. *risiana* Shanghai p. 93, FOREL Rev. suisse Zool. 30.—*M. structor* st. *striaticeps* ♀ p. 319, *aegyptiacus* varr. n. *felah* Cairo p. 321, *foreli*, *fossulatus* p. 323, *surcoufi* p. 324, Tunis, Algeria, *instabilis* st. *minor* var. n. *maura* Canary Is., N. Africa, p. 325 (figs.), SANTSCHI Rev. suisse Zool. 30.

Monomoriini trib. n. p. 45, WHEELER Schr. physik. Ges. Königsberg 55 1915.

*Monomorium (Xeromyrmex) viator* S.W. Africa fig. p. 280, *M. (Parholcomyrmex) epinotiale* Belgian Congo p. 281 spp. n., SANTSCHI Rev. zool. afr. 11.—*M. lameerei* var. n. *staudereri* Algeria p. 42, WOLF Ber. Natw. Ver. Innsbruck 35 1915.—†*M. mayrianum* sp. n. Baltic amber p. 45, WHEELER Schr. physik. Ges. Königsberg 55 1915.

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†*Nothomyrmica* gen. n. (type *Macromischa rudis* Mayr) p. 60, *intermedia* sp. n. Baltic Amber p. 61, and notes on other spp., WHEELER Schr. physik. Ges. Königsberg 55 1915.

*Oecophylla* notes on fossil and living spp. pp. 99-150, ÉMERY Rend. Acc. Sci.

Bologna 25 1921.—*O. smaragdina*, biology p. 362 (figs.), p. 681, HINGSTON J. Bombay Nat. Hist. Soc. 29.—†*O. brevinodis* sp. n. Baltic amber p. 116, *brischkei* Mayr redescribed p. 113, figs., WHEELER Schr. physik. Ges. Königsberg 55 1915.

*Oxyopomyrmex insularis* var. n. *major* Teneriffe, *sabulonis* var. n. *rugocciput* Tunis p. 326, SANTSCHI Rev. suisse Zool. 30.

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*Paracryptocerus maryri* st. n. *reichenbergeri* p. 98, SANTSCHI Bull. Soc. Sci. nat. Lausanne 54 1921.

†*Parameranoplus primaevus* sp. n. Baltic amber, fig., p. 69, WHEELER Schr. physik. Ges. Königsberg 55 1915.

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†*Platythyrea primaeva* sp. n. Baltic amber p. 36 figs., WHEELER t.c.—*P. meinerti* st. n. *boliviana* p. 83, SANTSCHI Bull. Soc. Sci. nat. Lausanne 54 1921.—*P. cyriluli* sp. n. Angola p. 88, FOREL Rev. suisse Zool. 30.

*Pogonomyrmex lobatus* Argentine p. 96, *P. (Ephebomyrmex) laevigatus* S. Chili p. 97, spp. n., *P. coarctatus* descr. of male p. 95, SANTSCHI Bull. Soc. Sci. nat. Lausanne 54 1921.

*Ponera punctatissima* var. n. *exacta* p. 134, SANTSCHI Bol. Soc. esp. Hist. nat. 23.—*P. reichenspergeri* p. 1255, *neglecta* p. 1257, *idelettae* p. 1258 spp. n. Brazil, SANTSCHI Rev. Mus. Paul. 13.—*P. viri* sp. n. Brazil p. 247, SANTSCHI Rev. suisse Zool. 30.—†*P. atavia* ♀ described p. 38, WHEELER Schr. physik. Ges. Königsberg 55 1915.

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†*Prodromorphomyrmex* gen. n. p. 111, *primigenius* sp. n. Baltic amber p. 112, figs., WHEELER Schr. physik. Ges. Königsberg 55 1915.

*Proformica menozi* sp. n. Algeria, SANTSCHI Bol. Soc. esp. Hist. nat. 23.

†*Protaneuretus* gen. n. p. 71, *succineus* sp. n. p. 72, figs., Baltic amber, WHEELER Schr. physik. Ges. Königsberg 55 1915.

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*Pseudocyrtomyrma* subgen. n. vide *Polyrhachis*.

†*Pseudolasius boreus* sp. n. Baltic amber p. 133, figs., WHEELER Schr. physik. Ges. Königsberg 55 1915.

*Pseudomyrma dammosa* p. 139, *maligna* p. 143 (with var. n. *cholerica* p. 146, *crucians* p. 147) spp. n. Br. Guiana (figs.), WHEELER Zoologica 3 1921.

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†*Sicelomyrmex* gen. n. (type *Gesomyrmex corniger* Emery) p. 111, WHEELER Schr. physik. Ges. Königsberg 55 1915.

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†*Stigomyrmex venustus* Mayr redescribed, fig. p. 70, WHEELER Schr. physik. Ges. Königsberg 55 1915.

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*Plastotorymus*, key to European p. 401, RUSCHKA t.c.

*Pseudotorymus*, key to European p. 402, *salicis* Austria, Germany, *salviae* Germany p. 403, *leguminum* Bohemia, *brassicae* (fig.) Bohemia, Germany, Austria p. 404, *vittiger* Austria p. 406, spp. n., RUSCHKA t.c.

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*Brachymeria* Westwood (= *Chalcis* auct. nec F.), p. 24, GAHAN & FAGAN U. S. Nat. Mus. Bull. 124.

*Centrochalcidea* gen. n. for *Centrochalcis ruficaudis* Cameron 1913 nec 1905, p. 28, GAHAN & FAGAN U. S. Nat. Mus. Bull. 124.

*Centrochalcis ruficaudis* Cameron 1913 nec 1905, see *Centrochalcidea*.

*Chalcis*, key to Spanish p. 12, MERCIER Rev. Fitopat. 1.—*Chalcis*, auct. nec F., see *Brachymeria*.

*Dirhinus*, key to some Oriental species, p. 346, *banksi*, p. 347, *luzonensis*, *luciliae*, p. 348, Manila, spp. n. (figs.), ROHWER Philipp. J. Sci. 22.

*Leucospis aurantiaca* sp. n. Mongolia p. 96 (figs.?), *turkestanica* Rad. a subsp. of *dorsigera*, p. 99, SHESTAKOV Ann. Mus. zool. Acad. Sci. Russ. 24.

*Spilochalcis porteri* sp. n. Chile p. 81, BRÉTHES Rev. chil. Hist. nat. 27.

## EURYTOMIDAE.

*Bephrata cubensis* ♂ described p. 25 (fig.), BRUNER & ACUSA Rev. Agric. Com. Trabajo 6.

*Harmolita swezeyi* Hawaii p. 350, *panici* Virginia, *phalaridis* N. York p. 351, *cinnae* Ohio p. 352, *phalaricola* S. Dakota p. 353, spp. n. (fig.), PHILLIPS & POOS Kansas Univ. Sci. Bull. 14 1922.—*H.*, systematic position pp. 616–618, HEDICKE D. ent. Zs. 1923.

*Lisseurytoma nigricornis*, Cameron 1913 nec 1912, see *Lisseurytomella*.

*Lisseurytomella* gen. n. for *Lisseurytoma nigricornis*, Cameron 1913 nec 1912, p. 81, GAHAN & FAGAN U. S. Nat. Mus. Bull. 124.

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*Perilampus*, key to certain Oriental species, *singaporenensis* p. 350, *orientalis* p. 351 Singapore, spp. n., ROHWER Philipp. J. Sci. 22.

*Schizaspidia tenuicornis*, biology, CLAUSEN Ann. Ent. Soc. Amer. 16 pp. 195-217.

#### CLEONYMIDAE.

*Perniphora* gen. n. near *Cheiropachys* Westw., *robusta* sp. n. (fig.) Germany p. 198, RUSCHKA Ent. Mitt. 12.

#### EUPELMIDAE.

Eupelmids of Europe and Mediterranean Region, with keys, RUSCHKA Verh. zool.-bot. Ges. Wien 70 1920 pp. 234-315.

*Anastatus*, key to Spanish pp. 114-122 (fig.), BOLIVAR Y PIELTAIN Rev. Fitopat. 1.

*Calosota obscura* Austria p. 249, *anguinalis* Thuringen p. 250, spp. n., RUSCHKA Verh. zool.-bot. Ges. Wien 70 1920.—*C. fumipennis* sp. n. (fig.) Spain p. 65, BOLIVAR Y PIELTAIN Rev. Fitopat. 1.

*Cerambycobius bilongifasciatus* sp. n. N. Australia p. 97, GIRault Ins. Insc. Mens. 11.

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*Eusandalum flavipenne* sp. n. (no locality) p. 257, RUSCHKA Verh. zool.-bot. Ges. Wien 70 1920.—*E. compressistylus* sp. n. N. Australia p. 97, GIRault Ins. Ins. Mens. 11.

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*Polymoria dalmatica*, *elongata* spp. n. Germany p. 261, RUSCHKA Verh. zool.-bot. Ges. Wien 70 1920.—*P. iberica* sp. n. fig. Spain p. 21, BOLIVAR Y PIELTAIN Rev. Fitopat. 1.

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*Anagyrus longicornis* sp. n. Spain p. 474 (fig.), MERCET Bol. Soc. esp. Hist. nat. 22.

*Anusia*, redescription p. 286, MERCET op. cit. 23.

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*Aphidencyrtus aphidiphagus* Ashm., corrected synonymy p. 187, GAHAN Proc. Ent. Soc. Wash. 25.

*Aphycooides*, redescription p. 174 (figs.), MERCET Bol. Soc. esp. Hist. nat. 23.

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*Blatticida ashmeadi*, Girault nec Ashmead see *Blatticidella*.

*Blatticidella* gen. n. for *Blatticida* Girault nec Ashmead, p. 22, GAHAN & FAGAN U. S. Nat. Mus. Bull. 124 (6th April 1923).

*Blatticidella* gen. n. *aereitibiae* sp. n. Australia p. 144, GIRAULT Insec. Ins. Mens. 11 (10th Dec. 1923).

*Blepyrus tachigaliae* sp. n. Br. Guiana, p. 229, BRUES Zoologica 3 1921.

*Borrowella* gen. n., *bioculata* p. 99, *punctatinotum* p. 100, spp. n. N. Australia, GIRAULT Insec. Insc. Mens. 11.

*Bothriothorax paradoxus*, synonymy, re-description, p. 177 (figs.), MERCET Bol. Soc. esp. Hist. nat. 23.

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*Gyranusia* gen. n. near *Habrolepoidea*, p. 137, *porteri* sp. n. Chile p. 138 (fig.), BRÈTHES Rev. chil. Hist. nat. 24 1920.

*Gyrinophagus* gen. n. near *Schizonotus*, *luteipes* sp. n. Germany p. (208), RUSCHKA Verh. zool.-bot. Ges. Wien 64 1914.

*Habrolepoptyygis permirus* sp. n. Australia p. 147, GIRAULT Insec. Ins. Mens. 11.

*Leptomastix geminus* sp. n. E. Queensland p. 47, GIRAULT t.c.

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*Protyndarichus* nom. n. for *Tyndarichoides* Mercet p. 479, MERCET Bol. Soc. esp. Hist. nat. 22.

*Pseudaphycus maculipennis* sp. n. Canary Is. p. 140 (fig.), MERCET Bol. Soc. esp. Hist. nat. 23.—*P. utilis* sp. n. (fig.) Mexico p. 323, TIMBERLAKE Proc. Hawaiian Ent. Soc. 5.

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#### PTEROMALIDAE.

*Aplastomorpha calandrae* How. corrected synonymy p. 188, GAHAN Proc. Ent. Soc. Wash. 25.

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*Pachyneuron validum* sp. n. (fig.) California p. 110, WATERSTON Bull. Ent. Res. 14.—*P. siphonophorae* Ashm. corrected synonymy p. 187, GAHAN Proc. Ent. Soc. Wash. 25.

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*Azotus*, key to Spanish spp. p. 413, *matritensis* sp. n. Spain p. 410, MERCET Bol. Soc. esp. Hist. nat. 23.

*Cirrospilopsis nigrivariegatus*, Girault nec Brèthes, see *Giraultia*.

*Giraultia* gen. n. for *Cirrospilopsis* Girault nec Brèthes, p. 66, GAHAN & FAGAN U. S. Nat. Mus. Bull. 124.

*Melittobia acasta*, biology pp. 301–304, PICARD Bull. Soc. ent. Fr. 1922, Id. p. 469 figs. Bull. biol. Fr. & Belg. 57.

*Paracrias phytomyzae* sp. n. (fig.) Buenos Aires p. 156, BRÈTHES Rev. Zool. agric. & appl. 22.

*Perissopterus cowperi*, *emersoni*, spp. n. Australia p. 144, GIRAULT Insec. Ins. Mens. 11.

*Phytomyzophaga* gen. n. p. 154, *albipes* sp. n. (fig.) Buenos Aires p. 155, BRÈTHES Rev. Zool. agric. & appl. 22.

*Secodes capensis*, Girault nec Förster, see *Secodoidea*.

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*Tetrastichus diarthronomyiae* sp. n. Baltimore p. 65, GAHAN Proc. Ent. Soc. Wash. 25.—*T. thripophonus* sp. n. Trinidad p. 453, WATERSTON Bull. Ent. Res. 13.—*T. apantelicida* sp. n. Chile p. 128, BRÈTHES Rev. chil. Hist. nat. 25.

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*Aylacopsis* gen. n. near *Aylax*, *heraclei* sp. n. Saxony p. 82, HEDICKE Zs. Pflanzenkr. u. Gallerk. **33**.

*Bassettia ligni* sp. n. California p. 291 (fig.), KINSEY Bull. Amer. Mus. Nat. Hist. **46** 1922.

*Charips*, bionomics and post-embryonic development pp. 451-478, HAVILAND Q. J. Microsc. Sci. **65** 1921.

*Cothonaspis (Hexaplasta) hexatoma* Hartig, synonymy p. 39, HEDICKE Zs. Schädlingsbekämpfung **1**.—*C. (H.) fuscipes* sp. n. Germany p. 113, MEYER Zts. angew. Ent. **9**.

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**58.**—*N. decipiens* p. 292, *engelmanni* p. 293, *varians* p. 294 spp. n. California (figs.), KINSEY Bull. Amer. Mus. Nat. Hist. **46** 1922.

**Ichneumonoidea.****ICHNEUMONIDAE.**

Labeniidae Viereck, not a valid family, p. 45, CEBALLOS Bol. Soc. esp. Hist. nat. **23**.

Ichneumonidae in Pusa collection, DUTT Mem. Dept. Agr. India **8** pp. 13-27.

Contributions to a catalogue of the Danish Ichneumonidae, II, ESBEN-PETERSEN Flora og Fauna **1** 1923 pp. 89-96.

Hibernating Ichneumonidae from the Cambridgeshire fens, p. 152, HANCOCK Ent. Mo. Mag. **59**.

The life-history of the Danish Ichneumonidae with a catalogue of the species, KRYGER Flora og Fauna **1** 1923 pp. 41-48 & 97-105 17 figs.

Life-history of Pimpline spider parasites (*Polysphincta*, *Zaglyptus*, *Tromatobia*) pp. 137-205 (fig.), NIELSEN Ent. Medd. **14**.

Synonymy of some European Ichneumonidae p. 73, PFANKUCH D. ent. Zs. 1923.

Synonymy of types of Tryphonidae in Königsberg Museum p. 571, *Tryphon nigripes* f. n. *rufifemur* p. 577, PFANKUCH D. ent. Zs. 1923.

†*Acoenites statzi* sp. n. p. 85 fig., MEUNIER Misc. ent. **26**.

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*Angitia punctoria* sp. n. France p. 171, ROMAN Ent. Tidskr. **44**.

*Apechoneura nigritarsis* Cam. (= *A. foveata* Mocs.) p. 47 (figs.), CEBALLOS Bol. Soc. esp. Hist. nat. **23**.

†*Astiphromma brischkei* sp. n. from Baltic amber p. 332, BRUES Proc. Amer. Acad. Arts Sci. **58**.

*Barytarbes pictus* sp. n. Thuringia p. 383, HABERMEHL D. ent. Zs. 1923.

*Bassus cylasavorus* sp. n. Manila p. 352, ROHWER Philipp. J. Sci. 22.

*Blaptocampus maidan* sp. n. Siberia p. 50, SHESTAKOV Ann. Mus. zool. Acad. Sci. Russ. 24.

*Cecidonomus carri* sp. n. England p. 30, ROMAN Ent. Mo. Mag. 59.

*Chreusa samarensis* sp. n. Philippines p. 284 (fig.), CEBALLOS Bol. Soc. esp. Hist. nat. 23.

*Cratichneumon (Lissichneumon) laevis* Cam. ♂ India p. 26, DUTT Mem. Dept. Agr. India 8.

*Cryptus signatorius* synonymy p. 603, HABERMEHL D. ent. Zs. 1923.

*Cymodusa inclyta* Morley sp. n. (fig.) India p. 19, in DUTT Mem. Dept. Agr. India 8.

*Ephedrus incompletus* Prov. synonymy p. 42, MUESEBECK Proc. U. S. Nat. Mus. 63 art. 2.

*Ephialtes manifestator*, oviposition p. 153 (fig.), DINGLER Zts. angew. Ent. 9.

*Epiurus brevicornis* f. n. *rivalis* Germany p. 376, HABERMEHL D. ent. Zs. 1923.

*Exephanes (rhenanus* Haberm. ==) *occupator* Grav. f. *rhenana* Ulbr. p. 374, HABERMEHL t.c.

*Exochilum*, key to spp. p. 44, *callosum* sp. n. Mongolia p. 45, SHESTAKOV Ann. Mus. zool. Acad. Sci. Russ. 24.

*Exochus cohni* sp. n. Jakobsthal p. 384, HABERMEHL D. ent. Zs. 1923.

*Gambrus gallicus* sp. n. N. France p. 377, HABERMEHL t.c.

*Hemiteles areator* feeding of females pp. 1301–1302, FAURE & PAILLOT C.R. Soc. Biol. 89.

*Heteropelma grossator* sp. n. Siberia p. 46, SHESTAKOV Ann. Mus. zool. Acad. Sci. Russ. 24.

*Hieroceryx ascalaphoides* sp. n. Cameroons p. 92 (fig.), CEBALLOS Bol. Soc. esp. Hist. nat. 23.

*Holocremna obscura* sp. n. Sweden p. 173, ROMAN Ent. Tidskr. 44.

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*Ichneumon leucocerus* var. n. *ligeris*, *cyaniventris* var. n. *multialbonotatus*, *bioblitteratus*, France p. 14, PIC Échange 39.

*Isurgus*, discussion p. 139, WOLFF Arch. Nat. 85 A 3 1920.

*Labrorychus sibiricus* Siberia p. 48, *jacobsoni* p. 49 Turkestan, *kiritshenkoi* spp. n. p. 50 Persia, SHESTAKOV Ann. Mus. zool. Acad. Sci. Russ. 24.

*Lathroplex fusicornis* sp. n. England p. 31, ROMAN Ent. Mo. Mag. 59.

*Limnerium leontiniae* sp. n. Argentina p. 166, BRÈTHES An. Soc. rur. Argentina 57.—*L. crassifemur* development pp. 1045–1048, PAILLOT C.R. Soc. Biol. 89.

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*Meniscus exareolatus* sp. n. Germany p. 377, HABERMEHL D. ent. Zs. 1923.

*Meteorus*, key to N. American p. 7, *levis*, p. 11, *maximus* p. 13, *reticulatus* p. 14, *angustipennis* p. 19, *fumipennis* p. 20, *tibialis* p. 23, *terebraetus* p. 24, *horiiae* p. 25, *autographae* p. 30, *arizonensis* p. 34, *acronyctae* p. 35, *euschausiae* p. 37, *datanae* p. 38, spp. n., U. S., MUESEBECK Proc. U. S. Nat. Mus. 63 art. 2.

*Monoblastus substitutor* Thunb. (= *erythropygus* Grav.) p. 379, HABERMEHL D. ent. Zs. 1923.

*Neorhacodes enslini* Ruschka, probably an Ichneumonid, p. 169 fig., ROMAN Ent. Tidskr. 44.

*Omorga investigator* sp. n. Germany p. 384, HABERMEHL D. ent. Zs. 1923.

*Perilissus moravicus* sp. n. Moravia p. 379, HABERMEHL t.c.

*Phaeogenes dentatus* sp. n. Belleroche p. 14, PIC Échange 39.—*P. petersoni* sp. n. Denmark p. 376, HABERMEHL D. ent. Zs. 1923.

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*Polysphincta nielseni* sp. n. p. 207  
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 ROMAN Ent. Medd. 14.—*P.*, parasitism  
 on spiders, life-history, LICHTENSTEIN  
 & RABAUD Trav. Inst. Zool. Univ.  
 Montpellier (2) Mem. 33 pp. 267–287.

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 p. 381, HABERMEHL D. ent. Zs. 1923.

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 A 3 1920.

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 MOUR Bull. Soc. ent. Fr. 1923.

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*retinentia, regula* p. 166, *requieta, refuga, retroversa* p. 167, *reliquia, resticula* p. 168  
Alaska spp. n., MACGILLIVRAY J. N. Y. Ent. Soc. 31.—*T. rutila, rumina* spp. n. Alberta p. 160, MACGILLIVRAY Can. Ent. 55.

*Thrinax*, biology p. 365, PEACOCK Proc. Univ. Durham Phil. Soc. 6.

*Trichiosoma confundum* sp. n. Alberta p. 161, MACGILLIVRAY Canad. Ent. 55.

*Xyela intrabilis* sp. n. New York p. 53, MACGILLIVRAY Bull. Brooklyn Ent. Soc. 18.

## LEPIDOPTERA.

Lepidoptera of Kielce (Poland) p. 145, BIEZANKO Soc. Amis Sci. Poznan Trav. Com. Sci. Mat. Nat. 2 Ser. B.

Lepidoptera from Smaalenen (Norway), BARCA Norsk Ent. Tidsskr. 1 pp. 216–234.

Lepidoptera from Poland pp. 1–23, BIEZANKO Kosmos Leopol 1923.

Lepidoptera from North Carolina p. 113, BRIMLEY Ent. News 34.

The literature on the sphragis of Lepidoptera, pp. 102–183 (figs.), BRYK Arch. Naturg. 85 A 5.

List of recorded structural abnormalities in Lepidoptera pp. 10–69, COCKAYNE London Naturalist 1921 1922.

Lepidoptera of the Pribilof Islands, Alaska, FORBES North Amer. Fauna 46 pp. 147–149.

Notes on the Lepidoptera of the Constantinople District (Asia) and Brusa, GRAVES Ent. Rec. 35 pp. 95–96.

Scent apparatus in Lepidoptera pp. 26–67, figs., GRUSZ Allat. Közlem. 11 1912.

Lepidoptera of the S. Ebudes, Hebrides, p. 125, HANCOCK Scot. Nat. 1923.

List of the Macrolepidoptera of Digne 124 pp., HEINRICH Beiheft D. ent. Zs. 1923.

Additions and corrections to the Macrolepidopterous fauna of Bukowina, HORMUZAKI Verh. zool.-bot. Ges. Wien 66 1916 pp. 401–417.

A catalogue of Lepidoptera observed in Jutland in 1920–22, KNUDSEN Flora og Fauna 1923 pp. 8–12.

Practical Entomologist's Textbook, Vol. II, Lepidoptera iv + 172 pp., LEDERER Verlag. internat. Entomologenvereins 1921.

Lepidoptera producing and inhabiting galls, MEESS Zoologica Stuttgart 24 pp. 499–584 pls.

On the origin of some geographical races of Lepidoptera, PICTET C.R. Soc. Phys. Hist. nat. Genève 34 pp. 32–34

The numbers and distribution of species of Lepidoptera, REBEL Verh. zool.-bot. Ges. Wien 68 1918 pp. (44)–(59) 3 tables.

Pedes spurii of the larvae of Lepidoptera, pp. 1–78 (pls.), SCHULTZE Arch. Naturg. 85 A 1 1920.

Notes and corrections to Seitz's Macrolepidoptera of the World, Palaeoarctic Fauna, II and III, ZERNY Verh. zool.-bot. Ges. Wien 68 1918 pp. (36)–(44).

## Rhopalocera.

Notes on life histories of Australian Butterflies pp. xvii–xxiii, HULL Proc. Linn. Soc. N.S.W. 48.

Rhopalocera of Argentina, KÖHLER Fauna argentina I, 34 pp. 3 pls.

Rhopalocera of N. W. France, analysis, keys, numerous figs., OBERTHÜR & HOULBERT Bull. Soc. sci. med. Rennes 29 1920 pp. 217–232, 30 1921 pp. 233–260.

Notes on the life histories of Australian butterflies, WATERHOUSE Proc. Linn. Soc. N.S.W. 48 p. 17.

## PAPILIONIDAE.

Keys to Indian genera and spp. of Papilionidae pp. 230–245 figs., EVANS J. Bombay Nat. Hist. Soc. 29.

*Doritis apollinus* biology and distribution in Balkan Peninsula pp. 15–36, var. n. *thracica* Thrace p. 53, BURESH Mitt. Bulg. Ak. Wiss. 12 1915.

*Papilio*, orthogenesis in, p. 16 (figs.), LANG Proc. Geol. Ass. London 34.—*P.* (*Troides*) *prattorum* f. n. *mixtum* Buru p. 25, JOICEY Entomologist 56.—*P. agamemnon* var. *argynnus* ab. n. *ignaurea* Little Kei p. 227, HULSTAERT Ann. Mag. N. H. (9) 12.—*P. agavus* ab. n. *aurimaculatus* Brazil p. 18, CLÉRAT Bol. Soc. ent. Brazil 1922.—*P. agetes* subsp. n. *hönei* S. China p. 153, MELL D. ent. Zs. 1923.—*P. castor* ab. n. *necopinatus* India p. liv, JURRIAANSE & LINDEMANS Tijdschr. Ent. 64 1921.—*P. childrenae* subsp. n. *espinayi* E. Ecuador, garleppi subsp. n. *insidiosus* Guiana p. 360, *zagreus-bacchus* f. n. *lathyi* Peru, *cacicus* f. n. *derufa* p. 361 Colombia, *elwesi* subsp. n. *cavaleriei* C. China, *gelon* f. n. *taeniolata* New Caledonia p. 362, LE CERF Bull. Mus. Hist. nat. Paris 1923.—*P. ciliix* f. *latefasciatus* New Mecklenburg p. 96, NIEFELT Intern. ent. Zs. 17.—*P. maacki* abb. n. *sandigi*, *androtopa* p. 54, f. n. *postvernalis* p. 58 Vladivostok, BRYK Intern. ent. Zs. 17.—*P. machaon* ab. n. *incompletus* (fig.) p. 130, MASLOWSCY Polskie Pismo Ent. 2.—*P. machaon* ab. n. *exocellatus* p. 29, CABEAU Rev. mens. Soc. ent. Namur 23.—*P. machaon*, teratology in, p. 25, UFFELN Intern. ent. Zs. 17.—*P. maroni* sp. n. French Guiana fig. p. 144, rectification p. 215, MOREAU Bull. Soc. ent. Fr. 1923.—*P. polytes* f. *polytes* (fig.) p. 316, *parinda* (fig.) p. 317 aberrations, HENRY Spolia Zeylanica 12.—*P. zaleucus* var. n. *punctata*, *clytia* var. n. *dissimila*, *dissimillima*, *alcinous tytleri* (= *impediens*, Tyt. nec Roth.) India p. 245 (footnote), EVANS J. Bombay Nat. Hist. Soc. 29.

*Parnassius*, notes on, in California, COMSTOCK Bull. S. Cal. Acad. Sci. 22 pp. 15 & 75 (figs.)—*P. apollo* subsp. n. *laurinus* p. 271, *ladinus* p. 287, *venustus* p. 289, Eastern Alps, BELLING D. ent. Zs. 1923.—*P. apollo* var. n. *laufferi*, abb. n. *esendei* p. 29 (figs.), *albidociliata* p. 30 Spain, BRYK Soc. ent. 38.—*P. apollo* ab. n. *rubrofasciata* Germany p. 28, FAGNOUL Mitt. Bad. Ent. Ver. 1.—*P. apollo* subsp. n. *montebaldensis* Monte Baldo, rosenius Bukovina p. 41, *panon* Bavaria p. 44, *helias* p. 55, *sotirion*, *tenebrosus* p. 56, *xerophilus*, *agyillus* p. 58 Switzerland, *ventidius* nom. n. for *bohemicus* Rebel (nec Fruhst.) p. 109, FRUHSTORFER Ent. Anz. 3.—*P. apollo* var. *intermedius*

Bang-Haas (= *strecsnoensis* Pax), var. n. *járaensis* Carpathians p. 32, KERTÉSZ Rovart. L. 26 1922.—*P. apollo* var. n. *járaensis* Transsylvania p. 9, KERTÉSZ Soc. ent. 38.—*P. apollo liburnicus* ab. n. *heseboloides*, Bosnia p. 351, SCHAWERDA Verh. zool-bot. Ges. Wien 64 1914.—*P. apollo* ff. n. *pentagonalis*, *felkeli*, *hypermelas* Innsbruck p. 1, STAUDER Ent. Anz. 3.—*P. apollo* f. n. *emilianus*, Appennines, p. 31 (figs.), TURATI Atti Soc. Ital. Sci. nat. 62.—*P. delius* f. n. *rubra* Italy p. 5, ROCCI Mem. Soc. ent. Ital. 2.—*P. delius* subsp. n. *catullius*, *aristion* Colorado, *astriotes* California, *sordellus* N. America p. 5, FRUHSTORFER Soc. ent. 38.—*P. nordmanni* var. n. *duplicatus* Caucasus p. 26, LUTKEMEYER Ent. Zs. 37.—*P. orleansi* abb. n. *distinguenda*, *clericalis*, *semidecora*, *expupillata*, *binocularis*, *graphica*, *communista*, *usurpator*, *sphenogon*, *parnasica*, *meyeri* Szetschwan p. 56, BRYK Ent. Zs. 36.—*P. polus* sp. n. Colorado p. 54, EHRMANN Lepidopterist Salem 1 1917.

*Teinopalpus aureus* sp. n. S. China p. 153, MELL D. ent. Zs. 1923.

#### PIERIDAE.

Keys to Indian genera and spp. of Pieridae pp. 246–260 (figs.), EVANS J. Bombay Nat. Hist. Soc. 29.

Aberrations of Pieridae new to Spain p. 71, SAGARRA Butll. Inst. Catalana Hist. nat. 21 1921.

*Anthocaris cardamines* see *Euchloë*.—*A. euphenoides* ab. n. *parvisignata* (non-descr.!) p. 94, SAGARRA Butll. Inst. catal. Hist. nat. 21 1921.

*Appias paulina* subsp. n. *grisea*, Malaya, p. 234, MOULTON J. Malayan Br. R. Asiat. Soc. 1.—*A. paulina* subsp. n. *griseoides*, Pulo-Condore Isl., p. 133, MOULTON J. Nat. Hist. Soc. Siam 6.—*A. ada* subsp. n. *virginea* Okaba p. 180, HULSTAERT Ann. Mag. N. H. (9) 11.

*Belenois gidica* genitalia and scent-scales, p. lxxviii, DIXEY Proc. Ent. Soc. 1922.

*Catopsilia eubule* f. n. *giacomelli* (fig.) Argentina, p. 16, KÖHLER Fauna argentina I.

*Colias*, inherited wing colour in, p. 495, GEROULD Genetics 8.—*C. croceus* var. n. (gen. var. n.) *mediterranea* p. 147, abb. n. *tergestina*, *adoratrix* p. 149

(figs.) Adriatic coast, STAUDER Boll. Soc. Adriat. 27 1912.—*C. edusa* ab. n. *schirberi* Gironde p. 171 (fig.), OBERTHÜR Études Lép. 21 pt. 2.—*C. hyale* ♀ ab. n. *inornatura* p. 39, DERENNE Rev. mens. Soc. ent. Namur 23.—*C. lesbia* ff. n. *obscura*, *flaveola* p. 17 (fig.) *maculata*, *micans* p. 18 (fig.) Argentina, KÖHLER Fauna argentina I.—*C. lesbia* forms and biology in Argentina, REED [Monograph] 20 pp. Mendoza 1922.—*C. palaeno* notes on, p. 89, KNAUSS Intern. ent. Zs. 17.—*C. palaeno* var. *europome* ab. n. *schröderi* Germany p. 13, HOMMEL Mitt. bad. ent. Ver. 1.—*C. palaeno* var. *europome* abb. n. *bimaculata*, *illigneri-reducta* p. 13 Germany, SCHRÖDER Mitt. bad. ent. Ver. 1.—*C. palaeno* ab. n. *nordströmi* Sweden, *palaeno* var. n. *synonyma* Central Sweden p. 108, *edusa* ab. n. *geisleri* Sweden p. 109, BRYK Ent. Tidskr. 44.—*C. philodice* f. n. *nigrofasciata* Massachusetts p. 22, f. n. *rothkei* U.S.A. p. 84, figs., REIFF Lepidopterist Salem 1 1917.—*C. poliographus*, varieties in Japan pp. 8–15, YOKOYAMA Dobuts. Z. 33 1921.—*C. viluiensis* f. n. *sulphureoflava* Siberia p. 281, SHELJUZHKO Ann. Soc. ent. Fr. 91.

*Delias prouti*, p. 25, *schmassmani* p. 26, *apatela* p. 26, *eschatia* p. 27, spp. n. Buru, JOCEY & TALBOT Entomologist 56.—*D. argenthana* ♀ f. n. *balli*, locality unknown p. 180, HULSTAERT Ann. Mag. N. H. (9) 11.—*D. ennia* subsp. n. *dorothea* Queensland p. 349 fig., TINDALE Trans. R. Soc. S. Aust. 47.

*Elodina perdita* subsp. n. *tongura* N. Australia p. 350 (fig.), TINDALE Trans. R. Soc. S. Aust. 47.

*Eronia cleodora* ff. n. *semipunctata* p. 583, *punctata* p. 584 Cape Colony, LE DOUX D. ent. Zs. 1923.

*Euchloë ausonia* (= *belia* auct. nec L.) synonymy of forms p. 169, f. n. *rothschildi* Granada p. 171, VERITY Ent. Rec. 35.—*E. cardamines* ab. n. *antiquincunx* Sweden p. 109, BRYK Ent. Tidskr. 44.—*E. cardamines* ab. n. *reductus* (fig.) Switzerland p. 124, MASLOWSCY Polskie Pismo Ent. 2.—*E. cardamines* abb. n. *umbratilis*, *marginemaculata* p. 29, *luteola*, *atavista* p. 30 Glatz Mts., STEPHAN D. ent. Zs. Iris 37.—*E. cardamines* f. n. *turritiferens* Sicily, p. 16 VERITY & QUERCI Ent. Rec. 35 Supl.

*Eurema proterpia* subsp. n. *watsonia* Ecuador p. 301, KLOTS Ent. News 34.

*Gandaca harina* subsp. n. *avra*, Malaya p. 236, MOULTON J. Malayan Br. R. Asiat. Soc. 1.

*Gonepteryx cleopatra* subsp. n. *balearica* Balearic Is. p. 85, BUBACEK Verh. zool.-bot. Ges. Wien 70 1920.—*G. rhamni* ♂ ab. n. *gerardi* p. 39, DERENNE Rev. mens. Soc. ent. Namur. 23.—*G. rhamni* ab. n. *nigrescens* Wickstädter Woods p. 40, HECKLER Ent. Zs. 37.

*Kricogonia cabrerai* sp. n. Cuba p. 211, RAMSDEN Mem. Soc. cubana Hist. nat. 4.

*Neophasia menapia* ab. n. *nigracosta* California p. 13, fig., COMSTOCK Lepidopterist Salem 2 1918.

*Pieris aglaope*, a form of *P. melete*, pp. 251–256, YOKOYAMA Konchu Sekai 25 1921.—*P. beckeri*, life-history, COOLIDGE Ent. News 34 1923 pp. 225–231.—*P. brassicae* ab. n. *rammei* Bremen p. 68, KNOP Ent. Zs. 36.—*P. brassicae* influence of coloured lights on pupae pp. 222–389 (figs.), DÜRKEN Arch. mikr. Anat. 99.—*P. brassicae* experiments on pupal coloration, BRECHER Anz. Ak. Wiss. Wien 57 1920 p. 157; 59 1922 pp. 15–16 228–230.—*P. brassicae*, hibernation, p. 89, PICARD Bull. biol. Fr. & Belg. 57.—*P. guarani* sp. n. Argentina p. 15 (fig.), KÖHLER Fauna argentina I.—*P. manni* ff. n. *secundogenita*, *septembrina* Italy p. 19, VERITY & QUERCI Ent. Rec. 35 Supl.—*P. napi* subsp. n. *segonzaci* (with f. n. *deflava*) p. 197 Morocco, LE CERF Bull. Soc. ent. Fr. 1923.—*P. napi* ab. n. *nanella* Germany p. 14, STRAND Arch. Nat. 85 A 4 1920.—*P. phileris* var. n. *aurata* Madagascar p. 120 (fig.), OBERTHÜR Études Lép. 21 pt. 2.—*P. napi* ab. n. *continua* Sweden p. 107 (fig.), BRYK Ent. Tidskr. 44.—*P. rapae* ab. n. *vestalis* p. 97 (figs.), f. n. *perkeo* p. 100, STAUDER Boll. Soc. Adriat. 25 1911.—*P. rapae* ab. n. *brunneoflavida* p. 121, *manni manni* ab. n. *semipicta* p. 130, *napi* ab. n. *thusnelda* p. 139 (figs.) Adriatic coast, STAUDER op. cit. 27 1912.—*P. rapae* ab. n. *unimaculata* Japan, YOKOYAMA Dobuts. Z. 33 1921 pp. 384–389.—*P. rapae*, variation in wing spots, YOKOYAMA Dobuts. Z. 33 1921 pp. 429–438 6 figs.—*P. zochalia*

*ff. n. reducta* p. 582, *grisea* Transvaal, *elly* Cape Colony p. 583, LE DOUX D. ent. Zs. 1923.

*Pontia daplidice ff. n. subalbidice* p. 17 *zellerica* p. 18 Italy, VERITY & QUERCI Ent. Rec. 35 Supl.

*Pseudopontia paradoxa*, bionomics p. lvi, subsp. n. *australis* Congo p. lxiv (figs.), POULTON Trans. Ent. Soc. 1922.

*Tatochila volxemi var. n. fulva* Argentina p. 14 (fig.), KÖHLER Fauna argentina I.

*Teracolus daira ff. n. punctissima*, *subpunctata*, *feminilis*, *puerilis*; *pyroleuca abb. n. meieri*, *regrediens* N. W. Africa p. 5, STAUDER Ent. Anz. 3.

*Terias apatosa sp. n.* Olliliet and Tenimber p. 180 (fig.), HULSTAERT Ann. Mag. N. H. (9) 11.—*T. candida* subsp. n. *talboti* Great Kei, *blanda* subsp. n. *dosithea* Tenimber p. 228, HULSTAERT op. cit. (9) 12.—*T. hecate* aberration p. 317 (fig.), HENRY Spolia Zeylanica 12.—*T. libythea* subsp. n. *dionysia* Tenimber p. 623 (figs.), HULSTAERT Ann. Mag. N. H. (9) 11.—*T. thymetus* f. n. *cordobensis* Argentina p. 15 (fig.), KÖHLER Fauna argentina I.

*Udaiana cynis* subsp. n. *tiomana*, Mâlaya, p. 235, MOULTON J. Malayan Br. R. Asiat. Soc. 1.

#### DANAIDAE.

Keys to Indian genera and spp. of Danaidae, pp. 519–524 (figs.), EVANS J. Bombay Nat. Hist. Soc. 29.

*Ceratinia coeno* subsp. n. *angustior* Colombia p. 162, SCHAUSS & COCKERELL Proc. Ent. Soc. Wash. 25.

*Danaida juventa* subsp. n. *kollerii* Merauke & Okaba p. 181, HULSTAERT Ann. Mag. N. H. (9) 11.

*Danais chrysippus* in Algeria p. 134, DEMAISON Bull. Soc. ent. Fr. 1923.

*Euploea alecto* subsp. n. *rothschildiana* p. 182, *confusa* subsp. n. *marinda* Merauke p. 624, HULSTAERT Ann. Mag. N. H. (9) 11.

*Hirsutis virginalis* sp. n. Argentina p. 19 (fig.), KÖHLER Fauna argentina I.

*Ideopsis daos*, early stages, p. 260, BROOKS J. Malayan Br. R. Asiat. Soc. 1.

*Pigritia* see *Pigritina*.

*Pigritina* n.n. for *Pigritia* d'Almeida (nec Clemens) p. 72, HEDICKE D. ent. Zs. 1923.

*Tellervo assarica* subsp. n. *adriaansei* New Guinea p. 230, HULSTAERT Ann. Mag. N. H. (9) 12.

#### NYMPHALIDAE.

*Abrota ganga* subsp. n. *flavina* S. China p. 157, MELL D. ent. Zs. 1923.

*Acraea jodutta* *integra* p. 1121, *peneleos* *castanea* p. 1124, *oberthuri* *ornata* p. 1130, *bonasia* *implicata* p. 1131, abb. n., *acutipennis* sp. n. p. 1140 (fig.) Central Africa, SCHULTZE & AURIVILLIUS Ergeb. 2tn. D. z. Afr. Exped. 1910–1911 1 Lief. 17.—*A. caldarena* *caldarena* f. n. *pallida* S.W. Africa, subsp. n. *necessaria* p. 209, ff. n. *obscuroides*, *decepta* p. 211, *kohambullensis* Congo p. 212, *natalica* *natalica* ff. n. *albiventris* B. E. A. p. 214, *albata* Tanganyika Terr., *leucopyga* f. n. *propagata* Belgian Congo p. 215, *enedon* ff. n. *alciprioides*, *dairvallcippa* Tanganyika Terr., *büttneri* f. n. *contracta* Belgian Congo, *acrita* *pudorina* f. n. *rubida* B. E. A. p. 216, *caecilia* f. n. *varia* Sierra Leone p. 217, *nohara* f. n. *noharoides* Tanganyika Terr., *zetes* *barberi* f. n. *eros* S.W. Africa p. 218, *periphanes* *beni* f. n. *bihensis* Angola, *simulata* sp. n. Victoria Nyanza p. 220, *igola* ff. n. *turbata* Gazaland p. 221, *fasciola* Tanganyika Terr., *oberthüri* f. n. *kuntzeni*, *violae* *neobule* f. n. *camaenopsis* Tanganyika Terr. p. 222, *pudorella* f. n. *heringi* B. E. A., *zetes* subsp. n. *ukerewensis* p. 223, *oncaeae* f. n. *distincta* Tanganyika Terr. p. 225, LE DOUX D. ent. Zs. 1923.

*Adelpha wernickei* sp. n. Colombia p. 58, RÖBER Ent. Mitt. 12.

*Anartia jatrophae* f. n. *pallida* Argentina p. 24 (fig.), KÖHLER Fauna argentina I.

*Apatura ilia* f. n. *blankensteinii* Serbia p. 133, NIEPELT Intern. ent. Zs. 17.—*A. ilia* ab. n. *delcourii* Belgium p. 56, CABEAU Rev. mens. Soc. ent. Namur 23.—*A. iris* f. n. *perlinaghia* Italy p. 117, TURATI Boll. Soc. ent. ital. 55.—*A. subsplendens* sp. n. p. 156, *subcaerulea* f. n. *albifasciata* S. China p. 157, MELL D. ent. Zs. 1923.

*Argynnис*, variation in, OBERTHÜR Études Lép. 20 p. 293 (figs.)—*A. aberrations* pp. 82–83, STÖCKL Polskie Pismo Ent. 2.—*A. aglaia* subsp. n. *scotica* Sutherland p. 109, WATKINS Entomologist 56.—*A. aglaia* var. *fortuna* abb. n. *shanae*, *wilemania*, Japan, KUWAYAMA Dobuts. Z. 33 1921 pp. 332–337.—*A. lathonia sheljuzhkoi*, notes on, p. 513, STAUDER D. ent. Zs. 1923.—*A. nikias* sp. n. New Mexico p. 55, EHRENMANN Lepidopterist Salem 1 1917.—*A. niobe* var. n. *meridionalis* Bosnia and Herzegovina p. 232, SCHÄWERDA Verh. zool.-bot. Ges. Wien 66 1916.—*A. niobe* var. n. *diocletiana* Adriatic coast p. 107 (figs.), STAUDER Boll. Soc. Adriat. 25 1911.—*A. pales* ab. n. *othello* Davos p. 212, CORNELSEN Intern. ent. Zs. 16.—*A. paphia valesina* heredity pp. 3–5, FISCHER Schweizer Ent. Anz. 2 1923.—*A. paphia* ab. n. *caroffiana* France p. 24, CABEAU Rev. mens. Soc. ent. Namur 23.—*A. paphia* ab. n. *nana* Glatz Mts. p. 42, STEPHAN D. ent. Zs. Iris 37.

*Basilarchia astyanax* var. *albofasciata* bred p. 93, UNZICKER Lepidopterist, Salem 1 1917.

*Brenthis*, revision of Chilean spp. pp. 462–470 (fig.), SILVA FIGUEROA Rev. chil. Hist. nat. 25.—*B. frigga* race n. *sagata* Colorado p. 146, BARNEs & BENJAMIN Canad. Ent. 55.

*Callicore gabazina* sp. n. Colombia p. 164 (figs.), OBERTHÜR Études Lép. 21 pt. 2.—*C. ducei* sp. n. Colombia p. 162, SCHAUSS & COCKERELL Proc. Ent. Soc. Wash. 25.—*C. peristera* subsp. n. *angustifascia* Amazons p. 95, RÖBER Stettin. ent. Zg. 84.

*Catonephele boyi* sp. n. Santarem p. 94, RÖBER Stettin. ent. Zg. 84.

*Charaxes epijasius* ff. n. *murina* Niger, feisthameli Casamance, *castor* f. n. *antiqua* Calabar p. 364, *brutus angustus* f. n. *fractifascia* Gabun, *pelias* f. n. *liberieae* p. 365 Liberia *cynthia* subsp. n. *kinduana* Belgia Congo p. 366, f. n. *albofascia* p. 367 Kameruns, *lucretius* f. n. *caliginosa* Gabun, subsp. n. *lucida* p. 366 Liberia, Guinea, *varanes* f. n. *brachycarda* Mozambique p. 367, *pleione* Godt. (= *Phelognoma lichas* Dbd.), *autamboulou* f. n. *meridionalis* p. 428, *zoolina neanthes* f. n. *homochroa*, *zoolina betsimisaraka* f. n.

*firmus* p. 429 Madagascar LE CERF Bull. Mus. Hist. nat. Paris 1923.—*C. madensis*, male described p. 28 Buru, JOCEY Entomologist 56.—*C. jasius* ab. n. *spoliatus* Adriatic coast p. 150 (fig.), STAUDER Boll. Soc. Adriat. 27 1912.

*Clossiana lucki* sp. n. Utah p. 14, REUSS Soc. ent. 38.

*Cymothoë lambertoni* sp. n. Madagascar p. 125 (figs.), OBERTHÜR Études Lép. 21 pt. 2.

*Cynthia asela* aberration (fig.) p. 315, HENRY Spolia Zeylanica 12.—*C. erota* subsp. n. *vanroesseli* Tenimber Islands p. 151, JURRIAANSE & VOLBEDA Tijdschr. Ent. 66.

*Diagora japonica* var. *australis* ab. n. *albidus* Japan, KUWAYAMA Dobuts. Z. 33 1921 pp. 332–337.

*Dichorragia ninus* subsp. n. *buruensis* Buru p. 28, JOCEY & TALBOT Entomologist 56.

*Dione vanillae*, albinism pp. 64 (fig.), GIACOMELLI Physis 5 1921.

*Dryas paphia valesina* f. n. *huhsti* Mark p. 26, f. *subtusaurea* notes on, p. 44, REUSS Soc. ent. 38.

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*Euthalia telchinoides* sp. n., *shinnini* subsp. n. *albescens* S. China p. 158, MELL t.c.

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*Hypolimnas dubia dubia* ab. n. *unialba* Belgian Congo p. 209, HULSTAERT Rev. zool. afr. 11.

*Limenitis archippus* var. n. *advena* New York p. 22, ELLSWORTH Lepidopterist Salem 2 1918.—*L. austenia* subsp. n. *montana* S. China p. 157, MELL D. ent. Zs. 1923.

*Melitaea*, variation in, p. 293 (figs.), OBERTHÜR Études Lep. 20.—*M. anicia* abb. n. *melanodisca* p. 34, *rubrolimbata* p. 36 Colorado, *monache* sp. n. California p. 71, figs., COMSTOCK Lepidopterist 2 1918.—*M. asteria* f. n. *obscura* Chavagn p. 199, HOSP Intern. ent. Zs. 16.—*M. athalia* ab. n. *mirefasciata* Belgium p. 56, CABEAU Rev. mens. Soc. ent. Namur. 23.—*M. aurelia* subssp. n. *marussia* Russia p. 171, *valsunga* Bavaria p. 172, *mendrisiota* Tessin p. 175, *athalia* subssp. n. *lachares* Scandinavia p. 178, *bathilda* Amur p. 179, *nossis* Kiushiu ? p. 180, *melida* L. Lugano p. 182, *noctula* Glarisch p. 184, *aurinia* subsp. n. *volupis* p. 167, *phoebe* subsp. n. *rovia* (with form. n. *autumnalis*) p. 169 Tessin, FRUHSTORFER Arch. Natg. 83 A 3 1919.—*M. aurinia* life history p. 67, HASSEIN Ent. Zs. 36.—*M. aurinia* ab. n. *diluta* Digne p. 48, HEINRICH Beiheft D. ent. Zs. 1923.—*M. cinxia* subsp. n. *cilantisi* Atlas Mts. p. 224, LE CERF Bull. Soc. ent. Fr. 1923.—*M. cynthia* f. n. *sterlineata* Italy p. 5, TURATI in ROCCI, Mem. Soc. ent. ital. 2.—*M. dejone* subssp. n. *rafaëla* N. Italy p. 11, *philomena* Portugal p. 12, *dictynna* subsp. n. *aurelita* Lombardy p. 12, *didyma* subsp. n. *eutitania* Liguria p. 13 FRUHSTORFER Arch. Natg. 83 A 6 1919.—*M. dictynna* ab. n. *corythaloides* p. (8) Austria, SPANNRING Verh. zool.-bot. Ges. Wien 72.—*M. dictynna* ab. n. *confusa* (fig.) Poland p. 126, MASLOWSCY

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*Lycaena eumedon*, biology pp. 24–30, MASLOWSCY Polsk. Pismo Ent. 2.—*L. coridon* ab. n. *semicinnus* France p. 49, *semiargus* ♂ ab. n. *adnotata* Belgium p. 57, CABEAU Rev. mens. Soc. ent. Namur 23.—*L. loewii* ab. n. *dingleri* Egypt p. 50 (fig.), ANDRES & SEITZ

*Senkenbergiana* 5.—*L. pheretes*, larva and pupa p. 168, VRETLIND Ent. Tidskr. 44.—*L. euphemus* f. n. *peninsulae* Sibillini Mts., *alcon turatiana* nom. n. for *italica* Trti, p. 7 VERITY Ent. Rec. 35 Supl.—*L. semiargus* ab. n. *cala*, f. n. *pusillargus*, *icarus* ab. n. *liliputana*, *argus* ab. n. *marpurgica* Germany p. 18, STRAND Arch. Natg. 85 A 4 1920.—*L. bellargus* ff. n. *analoga*, *leucopthalma* p. 188, *semiargus* subsp. n. *augusta*, and ff. n. *basicaca*, *dubiosa* p. 192 Ilyro-Adriatic region, STAUDER Zs. Wiss. Insektenbiol. 18.—*L. meleager* ff. n. *aucta*, *falcata*, *semiargus*, *aetnaea* f. n. *falcata* N. W. Africa p. 7, STAUDER Ent. Anz. 3.—*L. meleager* ab. n. *seminigra* Austria p. 151 (fig.), REBEL Verh. zool.-bot. Ges. Wien 64 1914.—*L. meledamon*, new hybrid, Vienna, p. 75, Id. op. cit. 70 1920.

*Lycaenesthes albida* sp. n. p. 1232 (fig.), *leptines* var. n. aut sp. n. *arnoldi* p. 1236, zenkeri ab. n. *connexa* p. 1237 W. Africa, SCHULTZE & AURIVILLIUS Ergebni. 2 tn. D. Z. Afr. Exped. 1910–1911 1 Lief. 17.

*Mimacraea schmidti* p. 1163, *telloides*, *pseudopaea* p. 1165 spp. n. C. Africa, SCHULTZE & AURIVILLIUS t.c.

*Neochrysops* see *Lepidochrysops*.

*Niphanda fusca* subsp. n. *shijima* Japan, *onoma* Sumatra, Billiton p. 72, *cyme* W. Java, *aristarcha* S.E. Mindanao p. 73, figs., FRUHSTORFER Arch. Natg. 83 A 1 1919.

*Ogyris zosine*, synonymy p. 344, subsp. n. *splendida* (fig.) S. Australia, p. 347, TINDALE Trans. R. Soc. S. Aust. 47.

*Oxylydes faunus* ab. n. *coerulescens* W. Africa p. 1221, SCHULTZE & AURIVILLIUS Ergebni. 2 tn. D. Z. Afr. Exped. 1910–1911 1 Lief. 17.

*Pentila leopardina* p. 1154, *fidonioides* p. 1155, *prodita* p. 1156, *lucayensis* p. 1158 spp. n., *abraxas* ab. n. *affixa* p. 1157, *kirbyi* ab. n. *fumosa* p. 1160 C. Africa (figs.), SCHULTZE & AURIVILLIUS t.c.

*Phaedrotres piassus* life-history, pp. 295–300, COOLIDGE Ent. News 34.

*Phytala schultzei* p. 1196 (fig.), *reducta* p. 1197 spp. n. S. Kamerun,

SCHULTZE & AURIVILLIUS Ergebni. 2 tn. D. Z. Afr. Exped. 1910–1911 1 Lief. 17.

*Pithecopus hylax* subsp. n. *corvus* Sumatra, etc., *corax* Java, Lombok, p. 79, *dionisius* subsp. n. *euantes* S. Moluccas p. 80, *staphylus* New Pomerania, *oinopion* Shortlands I. etc., p. 81, *zalmora* subsp. n. *fedora* Formosa, *dolona* S. China, *indigeta* Java, etc., p. 83, *tituria* Java, *heria* Kiriwini, etc., *colutha* Palawan p. 84, figs., FRUHSTORFER Arch. Natg. 83 A 1 1919.

*Plebeius* synonymy of certain spp. p. 9, VERITY & QUERCI Ent. Rec. 35 Supl.—*P. saepiolus* *insulanus* p. 98, *icariodes* *montis* p. 99, ff. n., Br. Columbia, BLACKMORE Canad. Ent. 55.—*P. argus* *italorum* f. n. *alboradians*, Appennines, p. 42, TURATI Atti Soc. Ital. Sci. nat. 62.

*Polyommatus candalus* *isauricoides* p. 155, *isaurica* *dorsum-stellae* subsp. n. Lebanon p. 156, GRAVES Entomologist 56.—*P. baeticus* var. n. *yanagawensis* Japan fig. p. 233, Hori Insect World 27.

*Poritia hewitsoni* subsp. n. *krishna* Assam p. 85, *phalena* subsp. n. *graecia* N.E. Sumatra p. 93, *proxima* subsp. n. *chimara* W. Borneo p. 94, *pheretia* subsp. n. *bilitis* N.E. Sumatra p. 97, *pediada* subsp. n. *semperi* Mindanao p. 100, *elegans* sp. n. N.E. Sumatra, etc., p. 87, figs., FRUHSTORFER Arch. Natg. 83 A 2 1919.

*Spalgis epius* subsp. n. *titius* Java, etc., p. 75, *georgi* Bohol, *semperi* Luzon p. 76, fig., FRUHSTORFER Arch. Natg. 83 A 1 1919.

*Tajuria arida* sp. n. Ceylon p. 323, RILEY Spolia Zeylanica 12.

*Telipna consanguinea* ab. n. *existincta* p. 1150 (fig.), *ruspinoides* sp. n. p. 1151 (fig.) W. Africa, SCHULTZE & AURIVILLIUS Ergebni. 2 tn. D. Z. Afr. Exped. 1910–1911 1 Lief. 17.

*Thecla publica* sp. n. W. Colombia p. 58, RÖBER Ent. Mitt. 12.—*T. burdi* sp. n. St. Vincent p. 277, KAYE Entomologist 56.

*Zizera minima* ab. n. *minutissima* Glatz Mts. p. 45, STEPHAN D. ent. Zs. Iris 37.

## HESPERIIDAE.

Indian Hesperiid Butterflies pp. 429–455 (figs.), pp. 703–717, BELL J. Bombay Nat. Hist. Soc. 29.

Annotated list of Cuban Hesperiidae p. 314, SKINNER & RAMSDEN Proc. Acad. Nat. Sci. 75.

The male genitalia of the Hesperiidae, SKINNER & WILLIAMS Trans. Amer. Ent. Soc. 49 pp. 129–153 44 figs.

*Adopaea flava* ab. n. *thaumatana* Germany p. 19, STRAND Arch. Natg. 85 A 4 1920.

*Amblyscirtes mate* sp. n. Mexico p. 12, DYAR Insec. Insc. Mens. 11.

*Atrytone (Euphyes) dukesi* sp. n. p. 209, (*Euphyes*) *dion* race n. *alabamae* p. 210, Alabama, LINDSEY Ent. News 34.

*Cyclogypha gundlachi* sp. n. Cuba p. 314, SKINNER & RAMSDEN Proc. Acad. Nat. Sci. Phil. 75.

*Cyclopides gatiana* sp. n. Madagascar p. 133 (fig.), OBERTHÜR Études Lèp. 21 pt. 2.

*Hasora woolletti* sp. n. Borneo p. 38, RILEY Entomologist 56.

*Hesperia*, of S.W. France pp. 119–122, HENRIOT Proc. verb. Soc. linn. Bordeaux 73 1921.—*H. juba* early stages p. 121 (figs.), LINDSEY J. Sci. Lab. Denison Univ. 20.—*H. ericetorum* life-history p. 140, COOLIDGE Ent. News. 34.—*H. sidae* ab. n. *hafneri* Adriatic coast p. 119 (fig.), STAUDER Boll. Soc. Adriat. 25 1911.—*H. alveus* var. n. *reverdini*, Bosnia and Herzegovina, p. (23), SCHAWERDA Verh. zool.-bot. Ges. Wien 68 1918.—*H.*, notes on and key to species of *alveus* and *malvae* groups pp. 189–201, REBEL Verh. zool.-bot. Ges. Wien 64 1914.—*H. caid* sp. n. Morocco p. 198, LE CERF Bull. Soc. ent. Fr. 1923.

*Lerodea neamathea* sp. n. (fig.) Florida p. 145, SKINNER & WILLIAMS Trans. Amer. Ent. Soc. 49.

*Megathymus stephensi* Skinner a distinct species p. 219, BARNES & BENJAMIN Ent. News 34.

*Mimabrix* gen. n. *woolletti* sp. n. Borneo p. 37 (fig.), RILEY Entomologist 56.

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*Perrotia teresina* sp. n. Madagascar p. 130 (fig.), OBERTHÜR Études Lèp. 21 pt. 2.

*Systasea microsticta* sp. n. Mexico p. 12, DYAR Insec. Insc. Mens. 11.

*Thanaos funeralis* biology, p. 175, COOLIDGE J. N. Y. Ent. Soc. 31.

*Trapezites flora* p. 131, *eximia* p. 132 spp. n. Madagascar p. 132 (figs.), OBERTHÜR Études Lèp. 21 pt. 2.

## Heterocera.

Descriptions of New Zealand Lepidoptera, MEYRICK Trans. N. Z. Inst. 54 pp. 162–169.

List of Microlepidoptera in Iowa, LINDSEY Proc. Iowa Acad. Sci. 29 p. 157.

The habits of various moths, PATIJAUD Rev. Hist. nat. & appl. (I) 4 pp. 266–274, 307–320, 344–348.

Catalogue of Microlepidoptera new to the Danish Fauna, pp. 39–40, SØNDERUP Flora og Fauna 1923.

## SYNTOMIDAE.

*Aethria platyzona* var. n. *restricta* Colombia p. 1, DOGNIN Hét. nouv. 24.

*Amata micantala* sp. n. Okaba p. 185, HULSTAERT Ann. Mag. N. H. (9) 11.—*A. tenera* sp. n. Belgian Congo p. 409, HULSTAERT Rev. zool. afr. 11.

*Autochloris quadrimacula* sp. n. Colombia p. 1, DOGNIN Hét. nouv. 21.

*Balacra magna*, *vitreigutta* p. 407, *similis* p. 408 spp. n. Belgian Congo, HULSTAERT Rev. zool. afr. 11.

*Ceramidia purpurina* sp. n. Colombia p. 1, DOGNIN Hét. nouv. 24.

*Ceryx rhysoptila* sp. n. Queensland p. 26, TURNER Proc. R. Soc. Vict. 35 1922.

*Ctenucha cajonata* sp. n. Peru p. 2, DOGNIN Hét. nouv. 21.—*C. tapajoza* sp. n. Amazonas p. 2, DOGNIN t.c. 24.

*Dysauxes punctata* var. n. *sketschana* Thrace p. 54, BURESCH Bulg. Ak. Wiss. 12 1915.

*Eressa paurospila* sp. n. Queensland, *megalospila* n.n. (for *strepsimeris* Hamps. nec Meyr.) p. 28, TURNER Proc. R. Soc. Vict. 35 1922.

*Eucereon exprata* sp. n. Amazonas p. 1, DOGNIN Hét. nouv. 19 1920.—*E. taperiniae* sp. n. Amazonas p. 4, DOGNIN t.c. 23.

*Gymnelia perniciosa* sp. n. Colombia p. 1, DOGNIN Hét. nouv. 23.

*Heliura thysbodes* var. n. *perfusa* Amazonas p. 3, DOGNIN Hét. nouv. 23.

*Macrocneme albiventer* sp. n. French Guiana p. 2, DOGNIN Hét. nouv. 23.

*Metamicroptera* gen. n. fig., for *rotundata* sp. n. Belgian Congo p. 409, HULSTAERT Rev. zool. afr. 11.

*Metarctia longipalpis, pallidicosta* spp. n. Belgian Congo p. 406, HULSTAERT Rev. zool. afr. 11.

*Parascepsis* gen. n. p. 2, *solox* sp. n. Amazonas p. 3, DOGNIN Hét. nouv. 23.

*Pheia taperiniae* sp. n. Amazonas p. 2, DOGNIN Hét. nouv. 21.

*Rhynchopyga bicolor* Dogn. error in description of, p. 1, DOGNIN Hét. nouv. 20 1922.

*Saurita fusca* sp. n. Amazonas p. 1, DOGNIN Hét. nouv. 23.

*Syntomis phegea* ff. n. *italica* p. 10, *reducta* p. 11, *privata*, *paupera* p. 12 Italy, ROCCI Mem. Soc. ent. ital. 2.—*S. microspila* p. 27, *ochrospila* p. 28, spp. n. Queensland, TURNER Proc. R. Soc. Vict. 35 1922.—*S. quinquemacula* Mab., *butleri* Mab., *anapera* Mab. see *Naclia* (Zygaenidae).

#### ARCTIIDAE.

*Acantharctia irregularis* sp. n. Senegal p. 14, GAEDE Ent. Rdsch. 40.

*Amastus supersimilis, vesta* spp. n. S. America p. 6, DOGNIN Hét. nouv. 21.

*Amaxia disconsistens* sp. n. Amazonas p. 2, DOGNIN Hét. nouv. 22.

*Amsacta nigrisignata, punctifasciata* spp. n., *hampsoni* f. n. *albescens* Central Africa p. 19, GAEDE Ent. Rdsch. 40.

*Antarctia altissima, ignota* spp. n., *variegata* var. n. *weymeri* S. America p. 28, GAEDE Ent. Rdsch. 40.

*Apantesis californica* sp. n. California p. 100, CASSINO Lepidopterist Salem 1 1917.—*A. floridana* sp. n. p. 2, with f. n. *ochracea* p. 4, Florida, figs., CASSINO t.c. 2 1918.

*Arachnis zuni* larva described p. 85. BONNIWELL Lepidopterist Salem 2 1918.

*Arctia hebe* ab. n. *semialba* (fig.) Poland p. 131, MASLOWSCY Polskie Pismo Ent. 2.—*A. caja* subsp. n. *virginivir* Alaska p. 12, DYAR Insec. Insc. Mens. 11.—*A. caja* ab. n. *leinfestii* Austria p. (10), REBEL Verh. zool.-bot. Ges. Wien 72.—*A. casta* ab. n. *preisseckeri* (fig.) p. (31), SCHAWERDA, Verh. zool.-bot. Ges. Wien 68 1918.—*A. villica* ab. n. *mixta* Stettin, p. 40, SCHMIDT Ent. Zs. 37.—*A. villica* var. n. *meridionalis* Digne p. 116, HEINRICH Beiheft D. ent. Zs. 1923.

*Asotomorpha* gen. n. type *phileta* Drury p. 410, HULSTAERT Rev. zool. afr. 11.

*Automolis costata* f. n. *nigroapicalis* Surinam, *flavobasalis* sp. n. Bolivia, p. 3, GAEDE Ent. Rdsch. 40.—*A. panema* sp. n. Brazil p. 5, DOGNIN Hét. nouv. 23.

*Callimorpha dominula*, notes on, p. 18, MRHA Ent. Zs. 37.—*C. quadripunctata* var. n. *latefasciata* Pyrenees p. (110), BUBAČEK Verh. zool.-bot. Ges. Wien 65 1915.

*Celama eurypennis* sp. n. Utah p. 13, DYAR Insec. Insc. Mens. 11.

*Chionaema fulvia* subsp. n. *laudans* Little Kei p. 187, HULSTAERT Ann. Mag. N. H. (9) 11.

*Chlanidophora centrata* sp. n. Mexico p. 28, GAEDE Ent. Rdsch. 40.

*Clemensia pontenova* sp. n. Amazonas p. 1, DOGNIN Hét. nouv. 22.

*Comacla senex* ab. n. *karvajszkyi* Hungary p. 22, DIOSZEGHY Rovart. L. 26 1922.

*Coscinia striata* f. n. *atterima* Germany p. 252, GAEDE D. ent. Zs. 1923.—*C. cribrum* var. n. *transversata* Pyrenees p. (110), BUBAČEK Verh. zool.-bot. Ges. Wien 65 1915.—*C. striata* ab. n. *laetifica* Adriatic coast p. 165 (fig.), STAUDER Boll. Soc. Adriat. 27 1912.—*C. striata* abb. n. *pfeifferi* Opcina, *commerelli* Istria, p. (177), STAUDER Verh. zool.-bot. Ges. Wien 70 1920.—*C. bifasciata* ab. n. *isochroma* Corsica p. (30), BUBAČEK, t.c. 72.

*Dasyactria* gen. n. p. 28, *grisea* sp. n. Cape p. 29, GAEDE Ent. Rdsch. 40.

*Diacrisia vulpinaria* ff. n. *nebulosa* (fig.), *karellica* Sweden p. 115, BRYK Ent. Tidskr. 44.—*D. mendica*, variation, ADKIN Proc. S. London Ent. & N. H. Soc. 1922-23 pp. 48-56.

*Dialeucias variegata* sp. n. French Guiana p. 7, DOGNIN Hét. nouv. 23.

*Diaphora mendica* var. n. *venosa* Ireland p. v, ADKIN Proc. Ent. Soc. 1922.

*Disoidemata conspersata* sp. n. Amazonas p. 4, DOGNIN Hét. nouv. 23.

*Elysius arpi* sp. n. Brazil p. 5, DOGNIN Hét. nouv. 21.—*E. discopunctata* sp. n. Sao Paulo p. 7, GAEDE Ent. Rdsch. 40.

*Estigmene boliviiana* sp. n. Bolivia p. 20, GAEDE Ent. Rdsch. 40.

*Eurypepla* gen. n. p. 30, *pteridaula* sp. n. Queensland p. 31, TURNER Proc. R. Soc. Vict. 35 1922.—See *Eurypeplella*.

*Eurypeplella* n.n. for *Eurypepla* Turner (nec Boheman) p. 226, HEDICKE D. ent. Zs. 1923.

*Halisdota fasciata* sp. n. Bolivia p. 11, GAEDE Ent. Rdsch. 40.—*H. boliviiana* sp. n. Bolivia p. 2, DOGNIN Hét. nouv. 20 1922.—*H. petulans* p. 7, *pulverulenta* p. 8 spp. n. S. America, DOGNIN t.c. 23.

*Heliosia aedumena* sp. n. Queensland p. 29, TURNER Proc. R. Soc. Vict. 35 1922.

*Hyperandra appendiculata* subsp. n. *diminuta* Amazonas p. 4, DOGNIN Hét. nouv. 21.

*Hyperborea kozhantshikovi* sp. n. (fig.) Siberia p. 288, SHELJUZHKO Ann. Soc. ent. Fr. 91.

*Hestiarcha atala* sp. n. Tasmania p. 29, TURNER Proc. R. Soc. Vict. 35 1922.

*Ichnocampa celerina* sp. n. Santa Cruz p. 7, GAEDE Ent. Rdsch. 40.

*Josiodes angustilinea* sp. n. Amazonas p. 4, DOGNIN Hét. nouv. 24.

*Macaduma strongyla* sp. n. Queensland p. 30, TURNER Proc. R. Soc. Vict. 35 1922.

*Macroptila androconiata* sp. n. S. America p. 3, DOGNIN Hét. nouv. 21.

*Maenas insularis* sp. n. Haiti p. 12, GAEDE Ent. Rdsch. 40.—*M. tenuis* var. n. *sinelinea* S. America p. 7, DOGNIN Hét. nouv. 21.

*Metacrisia albida* sp. n. Colombia p. 23, GAEDE Ent. Rdsch. 40.

*Metareva susumuca* Colombia p. 3, *paulina* Amazonas p. 4, spp. n., DOGNIN Hét. nouv. 24.

*Neritos improvisa* sp. n. Amazonas p. 6, DOGNIN Hét. nouv. 23.

*Ochrodotra flavescens* sp. n. Peru p. 7, GAEDE Ent. Rdsch. 40.

*Opharus interposita*, *brunnea* spp. n. Brazil p. 7, GAEDE Ent. Rdsch. 40.—*O. modulata* sp. n. Brazil p. 2, DOGNIN Hét. nouv. 20 1922.

*Pachasura* gen. n. p. 4, *stellata* sp. n. p. 5 Colombia, DOGNIN Hét. nouv. 24.

*Panachranta* gen. n. near *Brachiosia*, *lirioleuca* sp. n. Queensland p. 30, TURNER Proc. R. Soc. Vict. 35 1922.

*Paramsacta* gen. n., *pura* sp. n. Okaba p. 187 (fig.), HULSTAERT Ann. Mag. N. H. (9) 11.

*Paranerita trilobata*, *clarivena* spp. n. S. America p. 27, GAEDE Ent. Rdsch. 40.

*Parasemia plantaginis* ab. n. *seminigra* Steiermark p. (127), SCHWINGEN-SCHUSS Verh. zool.-bot. Ges. Wien 67 1917.

*Pelochyta adumbrata* sp. n. Bolivia p. 1, DOGNIN Hét. nouv. 20 1922.—*P. cinerea* f. n. *albida* Colombia p. 7, GAEDE Ent. Rdsch. 40.

*Pericallia geometrica* var. n. *kostlani* C. Africa p. 20, GAEDE Ent. Rdsch. 40.

*Pernambis albescens*, *fuscescens* spp. n. S. America p. 3, DOGNIN Hét. nouv. 19 1920.

*Phaeomolis obnubila* sp. n. Amazonas p. 5, DOGNIN Hét. nouv. 23.

*Philenora pteridopola* sp. n. Queensland p. 31, TURNER Proc. R. Soc. Vict. 35 1922.

*Phragmatobia luctuosa djamila* ab. n. *pantherata* p. (31), SCHAWERDA Verh. zool.-bot. Ges. Wien 68 1918.

*Progona madeira* sp. n. Amazonas p. 4, DOGNIN Hét. nouv. 23.

*Prumala venusta* sp. n. Bolivia p. 2, DOGNIN Hét. nouv. 19 1920.

*Pseudalus salmo* sp. n. Bolivia p. 12, GAEDÉ Ent. Rdsch. 40.

*Roeselia bicrenuscula* p. 14, *extusata* p. 15 spp. n. Arizona, *minuscula* subsp. n. *eucalyptula* California p. 14, DYAR Insec. Insc. Mens. 11.—*R. castigata* sp. n. Amazonas p. 2, DOGNIN Hét. nouv. 24.

*Secusio gaetana* sp. n. Madagascar p. 137 (fig.), OBERTHÜR Études Lép. 21 pt. 2.

*Seileria* gen. n., *eucyaniformis* sp. n. Colombia p. 9, DOGNIN Hét. nouv. 23.

*Spilosoma urtica* ab. n. *radiata* Vienna, p. (163), SCHÄWERDA Verh. zool.-bot. Ges. Wien 68 1918.—*S. urticae* ab. n. *anomala* (fig.) Warsaw p. 128, MASLOWSCY Polskie Pismo Ent. 2.—*S. flavidior* sp. n. no locality p. 14, GAEDÉ Ent. Rdsch. 40.

*Stenocytara* gen. n., *vittata* sp. n. Philippines p. 186 (fig.), HULSTAERT Ann. Mag. N. H. (9) 11.

*Syntomostola semiflava* sp. n. Amazonas p. 4, DOGNIN Hét. nouv. 21.

*Termessa orthocrossa* sp. n. Queensland p. 32, TURNER Proc. R. Soc. Vict. 35 1922.

*Thallaracha epileuca* p. 31, *epicella* p. 32 spp. n. Queensland, TURNER Proc. R. Soc. Vict. 35 1922.

*Topadesa pleurotana* sp. n. Formosa p. 184, STRAND Arch. Natg. 84 A 12 1920.

*Trichypha popayana* sp. n. Colombia p. 4, DOGNIN Hét. nouv. 21.

*Wurthia aurivillii* sp. n. Java p. 8 (fig.), KEMNER Ark. Zool. 15 no. 15.

*Zatrepheis iridescent* var. n. *pura* S. America p. 2, DOGNIN Hét. nouv. 19 1920.—*Z. olivenca* sp. n. Amazonas p. 3, DOGNIN op. cit. 21.—*Z. fallax* sp. n. Amazonas p. 5, DOGNIN op. cit. 23.

#### AGARISTIDAE.

*Aegocera mahdi*, stridulatory apparatus, p. xxiv, JORDAN Trans. Ent. Soc. 1922.

*Apaeogocera joiceyi* sp. n. Belgian Congo p. 204, HULSTAERT Rev. zool. afr. 11.

*Argyrolepidia goldiei* subsp. n. *similis* Merauke p. 188, HULSTAERT Ann. Mag. N. H. (9) 11.

*Heraclia subfascia* p. 201, schoutedeni p. 202 spp. n. Belgian Congo, HULSTAERT Rev. zool. afr. 11.

*Rothia martha, camilla* spp. n. Madagascar p. 148 (figs.), OBERTHÜR Études Lép. 21 pt. 2.

#### NOCTUIDAE.

Notes on distribution of N. American Noctuidae p. 30, LINDSEY Lepidopterist 2 1918.

Annotated list of Roman Noctuidae p. 29, ROSTAGNO Boll. Soc. zool. ital. (4) 1 1920.

*Abrostola suisharyonis* sp. n. Formosa p. 131, STRAND Arch. Natg. 84 A 12 1920.

*Acantholipes tenuipoda* p. 140, *larentioides* p. 142, (*Nolaseniola* subgen. n.) *plecopterooides* p. 141, spp. n. Formosa, STRAND Arch. Natg. 84 A 12 1920.

*Acontia lucida* f. n. *mediofasciata* Illyrio-Adriatic coast p. 44, STAUDER Ent. Anz. 3.

*Acripioides* gen. n., *trimacula* sp. n. Formosa p. 121, STRAND Arch. Natg. 84 A 12 1920.

*Acronycta orientalis* var. n. *galvagnii* Herzegovina p. 483, SCHÄWERDA Verh. zool.-bot. Ges. Wien 68 1916.—*A. clarescens* Gn., synonymy p. 152, BARNES & BENJAMIN Ent. News 34.—*A. rumicis* ab. n. *prüfferi* (fig.) Poland p. 130, MASLOWSCY Polskie Pismo Ent. 2.

*Acrosphalia* gen. n. (Acronyctinae) *kulmburgi* sp. n. (fig.), Russia p. (158), REBEL Verh. zool.-bot. Ges. Wien 68 1918.

*Adrapsa bupalistis* sp. n. Formosa p. 162, STRAND Arch. Natg. 84 A 12 1920.

*Agrotis wiskotti, culminicola, helvetica*, early stages pp. 1-12, CORTI Mitt. Ent. Zürich 1 1915.—*A. interjecta* var. n. *caliginosa* Fiume p. (279), SCHÄWERDA Verh. zool.-bot. Ges. Wien 68 1918.—*A. collina* ab. n. *loebeli* (fig.) Steiermark p. (15), REBEL Verh. zool.-bot. Ges. Wien 70 1920.—*A. culminicola* notes on, p. 25, SCHULTZ Ent. Zs. 37.—

*A. interjecta* varieties, p. 59, DERENNE Rev. mens. Soc. ent. Namur 23.—*A. grislini* var. n. *joannisi* Morbihan p. 71, GLAIS & LE PONTOIS Bull. Soc. ent. Fr. 1923.—*A. corticea* ab. n. *unimaculata* (fig.) Poland p. 130, MASLOWSCY Polskie Pismo Ent. 2.

*Alelimma zanclognathalis* p. 181, *zema*, *zemella* p. 182 spp. n. Formosa, STRAND Arch. Natg. 84 A 12 1920.

*Alelimminola* subg. n. see *Chusaris*.

*Aletia dentata* sp. n. N. Zealand p. 148, PHILPOTT Trans. N. Z. Inst. 54.

*Alika* gen. n., *typica* sp. n. Formosa p. 145, STRAND Arch. Natg. 84 A 12 1920.

*Alikangiana* gen. n., *signicosta* sp. n. Formosa p. 123, STRAND Arch. Natg. 84 A 12 1920.

*Allorhodoezia* gen. n. near *Rhodoezia*, *hampsoni* sp. n. Argentina p. 5 (fig.), BRÉTHES Reprint from Rev. Facultad Agronomía 15.

*Amphiptyra micans* ab. n. *baloghi* Hungary p. 22, DiÓSYEGHY Rovart. L. 26.

*Amyna insularum* sp. n. Galapagos Is. p. 37, SCHAUS Zoologica 5.—*A. (Formosamyna subgen. n.) frontalis* sp. n. Formosa p. 119, STRAND Arch. Natg. 84 A 12 1920.

*Anchocelis pistacina* var. n. *alba* England p. 87, PORRITT Ent. Mo. Mag. 59.

*Anereuthinula* gen. n. *lyncestidis* sp. n. Formosa p. 138, STRAND Arch. Natg. 84 A 12 1920.

*Anomis professorum* sp. n. Galapagos Is. p. 42, SCHAUS Zoologica 5.

*Antapлага caliente* sp. n. California p. 17 (figs.), HILL Bull. S. Cal. Acad. Sci. 22.

*Apamea*, Swedish species pp. 187–192 (fig.), WAHLGREN Ent. Tidskr. 44.

*Apopestes dilucida* var. n. *praeclara* p. (28), SCHAWERDA Verh. zool.-bot. Ges. Wien 68 1918.

*Argyractis (Oxylophilus) callista* sp. n. Texas p. 102 (fig.), FORBES Ent. News 33 1922.

*Armada turcorum* sp. n. Syria p. (223) (fig.), ZERNY Verh. zool.-bot. Ges. Wien 65 1915.

*Athetis (?) unduloma* sp. n. Formosa p. 109, STRAND Arch. Natg. 84 A 12 1920.

*Autographa*, synonymy of aberrational names pp. 211–213, BARNES & BENJAMIN Canad. Ent. 55. (See *Phytometra*, *Plusia*.)

*Bagisara gustata* sp. n. Arizona p. 17, DYAR Insec. Insc. Mens. 11.

*Bandelia* n.n. for *Nothophila* B. & L. p. 123, LINDSEY Ent. News 34.

*Bellura gortynoides*, *melanopyga*, larval habits, ROBERTSON-MILLER Ann. Ent. Soc. Amer. 16 pp. 374–383.

*Bleptina hadenalis* var. n. *alikangialis* p. 160, (*Bertula*) *grimsaardi* sp. n. Formosa p. 161, STRAND Arch. Natg. 83 A 10 1919.—*B. satyrata* sp. n. Formosa p. 163, STRAND op. cit. 84 A 12 1920.

*Bryocodia cryptogramma* sp. n. Trinidad p. 993 (fig.), KAYE Proc. Zool. Soc. 1922.

*Bryolimnia monodonta* sp. n. Trinidad p. 993 (fig.), KAYE Proc. Zool. Soc. 1922.

*Bryophila muralis* var. n. *brunnea* England p. 87, PORRITT Ent. Mo. Mag. 59.

*Calesidesma* gen. n., *fraternella* sp. n. Formosa p. 144, STRAND Arch. Natg. 84 A 12 1920.

*Callogonia virgo* ab. n. *ilonkae* Hungary p. 22, DiÓSZEGHY Rovart. L. 26 1922.

*Callyna monoleuca* var. n. *japonibia* Formosa p. 136, STRAND Arch. Natg. 84 A 12 1920.

*Calophasia casta* f. n. *castior* Spalato p. 44, STAUDER Ent. Anz. 3.

*Calpe novae-pomeraniae* sp. n. New Pomerania p. 143, STRAND Arch. Natg. 83 A 10 1919.

*Capnodes nigerrimasigna* sp. n. Formosa p. 133, STRAND Arch. Natg. 84 A 12 1920.

*Carea acutapex* sp. n. Formosa p. 123, STRAND Arch. Natg. 84 A 12 1920.

*Loutgen. n.*

*Catada pyralistis* sp. n. Formosa p. 158, STRAND Arch. Natg. 83 A 10 1919.

*Catephia shisa* sp. n. Formosa p. 137, STRAND Arch. Natg. 84 A 12 1920.

*Catocala amica* ssp. n. *novangliae* p. 12, ff. n. *melanotica*, *aurantiaca* p. 15, New England, figs., REIFF Lepidopterist Salem 1 1916.—*C. pura* var. n. *nigra* Utah p. 2, EASTMAN, *C. ilia* var. n. *normani*, fig., *coccinata* var. n. *chiquita* Massachusetts p. 3, BARTSCH Lepidopterist Salem 1 1916.—*C. helena* (renamed *patricia* p. 104) p. 61, *minerva* p. 63 Utah, reiffi p. 62 California, figs., spp. n., *ultronia* f. n. *nigrescens* U.S.A. p. 79, fig., *C. lacrymosa* f. n. *albomarginata* U.S.A. p. 104, CASSINO Lepidopterist Salem 1 1917.—*C. hermia* f. n. *vesta* Utah p. 9, BARNEs & McDUNNOUGH Lepidopterist 2 1918.—*C. delilah* f. n. *utahensis* Utah p. 14, *minuta* f. n. *hisera* Iowa p. 28, fig., *sappho* f. n. *cleis* Florida p. 46, *atala* Ontario, *barbara* California p. 52, *elizabeth* California p. 53 spp. n., *mira* var. n. *dana* Texas p. 54, figs., *blandula* var. n. *manitobensis* p. 81, *faustina* f. n. *rubra* Utah p. 84, CASSINO Lepidopterist 2 1918.—*C.*, list of food-plants of N. American species p. 28, list of eggs described p. 33, location of W. H. Edwards' types p. 44, *rosa* p. 60, *huachuca*, *ritana* p. 61, *elsa* p. 62 Arizona, *georgeana*, *cassinoi* p. 63 Utah, spp. n., *stretchi* var. n. *margherita* p. 65 California, *briseis* var. n. *clarissima* p. 66 Manitoba, BEUTENMULLER Lepidopterist Salem 2 1918.—*C. nuptialis* life history, figs., pp. 66–69, HISER Lepidopterist Salem 2 1918.—*C. sheba* sp. n. p. 99, *aspasia* f. n. *roseata* New Mexico p. 103, CASSINO Lepidopterist Salem 3 1919.—*C. herodias* ovum and larva described pp. 121–123 figs., KELLER Lepidopterist 3 1920.—*C. gracilis* ab. n. *lemmeri* Jersey p. 33, MAYFIELD Bull. Brooklyn Ent. Soc. 18.—*C. hypolita* var. n. *walteri* California p. 273, SCHWARZ Ent. News 34.—*C. puerpera* var. n. *diniensis* Digne p. 94, HEINRICH Beiheft D. ent. Zs. 1923.

*Chalciope cauinindana* sp. n. Formosa p. 127, STRAND Arch. Natg. 84 A 12 1920.

*Chalcoecia patina* sp. n. Paraguay p. 3, DOGNIN Hét. nouv. 20 1922.

*Chamyris obscura* sp. n. Georgia p. 19, DYAR Insec. Insc. Mens. 11.

*Chloantia hyperici* ab. n. *siegenfeldi* Bosnia & Herzegovina p. 239, SCHAWERDA Verh. zool.-bot. Ges. Wien 66 1916.

*Chusaris* (*Alelimminola* subg. n.) *dubiosa* sp. n. Formosa p. 156, STRAND Arch. Natg. 83 A 10 1919.—*C. (Luceriola* subgen. n.) *compripalpis* sp. n. Formosa p. 179, STRAND Arch. Natg. 84 A 12 1920.

*Cidariplura gladiata* ab. n. *ochreimacula* p. 149, STRAND Arch. Natg. 83 A 10 1919.—*C. gladiata* var. n. *gladiatella* Formosa p. 159, Id. op. cit. 84 A 12 1920.

*Cirphis cooperi* sp. n. Galapagos Is. p. 24, SCHAUS Zoologica 5.

*Cleophana* (*Amephana*) *dejeanii* subsp. n. *dalmatica* (fig.) Dalmatia, p. (107), REBEL Verh. zool.-bot. Ges. Wien 69 1919.

*Coccidiiphaga scitula* ab. n. *virginalis* Sicily p. 22, RAGUSA Boll. Soc. ent. ital. 15.

*Cosmia affinis* var. n. *morleyi* England p. 88, PORRITT Ent. Mo. Mag. 59.—*C. erythrargo* ab. n. *xantheago* Bosnia p. (91), SCHAWERDA Verh. zool.-bot. Ges. Wien 72.

*Cucullia artemisiae* f. n. *obscura*, Appennines, p. 53 (fig.), TURATI Atti Soc. Ital. Sci. nat. 62.—*C. lactucae* in Britain p. 8, WALKER Ent. Mo. Mag. 59.—*C. lucifuga*, *lactucae* in Sweden, pp. 193–199, WAHLGREN Ent. Tidskr. 44.—*C. umbratica* ab. n. *rhophana* Belgium p. 14, CABEAU Rev. mens. Soc. ent. Namur 23.—*C. alfarata*, larva p. 6, DYAR Insec. Insc. Mens. 11.

*Dasyblemma* gen. n. p. 18, *straminea* sp. n. California p. 19, DYAR Insec. Insc. Mens. 11.

*Dasygaster pammacha* sp. n. Tasmania p. 33, TURNER Proc. R. Soc. Vict. 35 1922.

*Derthisa glauccina* f. n. *flavosignata*, p. 51, *scoriacea* f. n. *obliterata*, p. 52 (figs.), Appennines, TURATI Atti Soc. Ital. Sci. nat. 62.—*D. trimacula* Schiff. f. n. *culoti* Sicily p. 21, RAGUSA Boll. Soc. ent. ital. 15.

*Diloba caeruleocephala* ab. n. *infumata*, Vienna, p. (150), SCHWINGENSCHUSS Verh. zool.-bot. Ges. Wien 68 1918.

*Diphthera alpium* f. n. *designata*, Appennines, p. 45 (figs.), TURATI Atti Soc. Ital. Sci. nat. 62.

*Dipterygia fuscocana* sp. n. Formosa p. 105, STRAND Arch. Natg. 84 A 12 1920.

*Ectogoniella* gen. n., *pangrapta* sp. n. Formosa p. 155, STRAND Arch. Natg. 84 A 12 1920.

*Edessena gentiusalis* var. n. *formosensis* p. 157, STRAND Arch. Natg. 84 A 12 1920.

*Egnasia castanea* ab. n. *subcoeca* p. 148, STRAND Arch. Natg. 83 A 10 1919.—*E. (?) nagadebooides* sp. n. Formosa p. 150, ID. t.c. 84 A 12 1920.

*Eligma bettiana* sp. n. S.W. Tanganika p. 85, PROUT Entomologist 56.

*Engelhardtia* gen. n., for *Trichopolia ursina* Smith, p. 125, BARNES & BENJAMIN Bull. Brooklyn Ent. Soc. 18.

*Epidromia zephyritis* sp. n. Galapagos Is. p. 43, SCHAUS Zoologica 5.

*Epitomiptera purpurascens* p. 994, *marmorata* spp. n. Trinidad p. 995 (figs.), KAYE Proc. Zool. Soc. 1922.

*Ercheia cyllaria* ab. n. *alikangensis* p. 138, STRAND Arch. Natg. 83 A 10 1919.

*Eriopyga perfragilis* sp. n. p. 16 Mexico, DYAR Insec. Insc. Mens. 11.

*Escaria clauda* subsp. n. *pallens* Mexico p. 423, BARNES & BENJAMIN Proc. Cal. Acad. Sci. 12.

*Eulocastra capnoessa* sp. n. Transcasplia p. (222) (fig.), ZERNY Verh. zool.-bot. Ges. Wien 65 1915.

*Euparthenos nubilis* larva described p. 134, BEUTENMULLER Lepidopterist Salem 3 1920.

*Euplexia* (?) *amblypennis* sp. n. Formosa p. 106, STRAND Arch. Natg. 84 A 12 1920.—*E. pamprepta* sp. n. Queensland p. 34, TURNER Proc. R. Soc. Vict. 35 1922.—*E. chloeropis* and *smaragdina* see *Syntheta*.

*Euxoa williamsi* sp. n. Galapagos Is. p. 32, SCHAUS Zoologica 5.—*E. lindseyi* sp. n. British Columbia p. 214, BLACKMOORE Canad. Ent. 55.—*E. dodi*, *clausa*, spp. n. Alberta p. 163, McDUNNOUGH Canad. Ent. 55.—*E. vertenteni* sp. n. Okaba p. 189, HULSTAERT Ann. Mag. N. H. (9) 11.

*Fodina antemedia* sp. n. Formosa (with ab. n. *obliterata*), *koseponis* ab. n. *shisana*, p. 144, STRAND Arch. Natg. 83 A 10 1919.

*Formosamyna* subgen. n. see *Amyna*.

*Gadirtha commixta* sp. n. Bolivia p. 9, DOGNIN Hét. nouv. 23.

*Grammodes algira* f. n. *defecta* Istria p. 44, STAUDER Ent. Anz. 3.

*Hadena usurpatrix* sp. n. Canary Islands p. (151), REBEL Verh. zool.-bot. Ges. Wien 64 1914.—*H. formosus* sp. n. New York p. 22, ELLSWORTH Lepidopterist Salem 2 1918.

*Harmodia compta* f. n. *grisescens*, Appennines, p. 50 (fig.), TURATI Atti Soc. Ital. Sci. nat. 62.

*Harrisonia* gen. n., *williamsi* sp. n. Galapagos Is. p. 36, SCHAUS Zoologica 5.

*Heliothis peltigera* ab. n. *condolens*, Bosnia & Herzegovina, p. 365, SCHÄWERDA Verh. zool.-bot. Ges. Wien 64 1914.—*H. dipsacea* f. n. *tristis* Illyro-Adriatic coast p. 44, STAUDER Ent. Anz. 3.

*Hiptelia ochreago* ab. n. *pallida* Steiermark, p. (150), SCHWINGENSCHUSS Verh. zool.-bot. Ges. Wien 68 1918.

*Hyblaea constellata* var. n. *triplagiata* p. 134, STRAND Arch. Natg. 83 A 10 1919.—*H. puera* bionomics Jamaica p. 148, DYAR Insec. Insc. Mens. 11.

*Hydrillodes submorosa* p. 165, *pseudomorosa* p. 166 spp. n. Formosa, STRAND Arch. Natg. 84 A 12 1920.

*Hydroeciodes cetebu*, *tintebela* spp. n. Mexico p. 16, DYAR Insec. Insc. Mens. 11.

*Hygrostolides* gen. n., *robustior* sp. n. p. 113 with var. n. *koseponis* p. 114 Formosa, STRAND Arch. Natg. 84 A 12 1920.

*Hypena obsitalis* ab. n. *cholcerica* p. (28), SCHÄWERDA Verh. zool.-bot. Ges. Wien 68 1918.—*H. dichromialis* p. 169, *peterseni* p. 170, *belindana* p. 171, *suisharyonis*, *nepana* p. 172, *depalpis* p. 173, *zillana*, *nepa* p. 174, *poa* p. 175, *cruca* p. 176 spp. n., *iconicalis* var. n. *apicipuncta* p. 171 Formosa, STRAND Arch. Natg. 84 A 12 1920.—*H. broadescens* sp. n. Trinidad p. 995 (fig.), KAYE Proc. Zool. Soc. 1922.

*Hypenagoniodes* gen. n. *vexatariola* sp. n. Formosa p. 177, STRAND Arch. Natg. 84 A 12 1920.

*Hyperlophoides* gen. n. (Ophiderinae), type *Zethes compactilis* Swinh. p. 146, STRAND Arch. Natg. 83 A 10 1919.

*Hypsipila signipalpis* ab. n. *warreni* p. 145, STRAND Arch. Natg. 83 A 10 1919.

*Hypsiforma lambertoni* sp. n. Madagascar p. 149 (fig.), OBERTHÜR Études Lép. 21 pt. 2.

*Lampra barnesi* distribution, BARNEs & BENJAMIN Insec. Insc. Mens. 11 pp. 135-136.

*Leucania albipuncta* subsp. n. *rufotincta* Mediterranean p. (42), WAGNER Verh. zool.-bot. Ges. Wien 70 1920.

*Lithacodia larentiooides* sp. n. Formosa p. 119, STRAND Arch. Natg. 84 A 12 1920.

*Litholomia napaea* var. n. *umbriasciata* British Columbia p. 216, BLACKMORE Canad. Ent. 55.

*Luceriola* subgen. n. see *Chusaris*.

*Luperina dumerilii* var. n. *adriatica* Adriatic coast p. 159, STAUDER Boll. Soc. Adriat. 27 1912.—*L. rubella* ab. n. *rhododendron* Bosnia & Herzegovina, p. 362, SCHÄWERDA Verh. zool.-bot. Ges. Wien 64 1914.

*Lycophotia oceanica* sp. n. Galapagos Is. p. 32, SCHAUS Zoologica 5.

*Mamestra dissimilis* ab. n. *distincta* Digne p. 77, HEINRICH Beiheft D. ent. Zs. 1923.

*Mecodina karapinensis* sp. n. Formosa p. 150, STRAND Arch. Natg. 84 A 12 1920.

*Melipotis harrisoni* sp. n. Galapagos Is. p. 42, SCHAUS Zoologica 5.—*M. jucunda* larva described p. 111, BEUTEN-MULLER Lepidopterist Salem 3 1919.

*Mesogona acetosellae* ab. n. *rufescens* p. (150), SCHWINGENSCHUSS Verh. zool.-bot. Ges. Wien 68 1918.

*Mocis incurvalis* sp. n. Galapagos Is. p. 41, SCHAUS Zoologica 5.

*Molvena* Turner see *Thalatha* Turner.

*Mythimna imbecilla* ab. n. *immaculata* S. Tirol p. (96), SCHÄWERDA Verh. zool.-bot. Ges. Wien 70 1920.

*Nagadeba obenbergeri* sp. n. Formosa p. 164, STRAND Arch. Natg. 84 A 12 1920.

*Neumogenia bellamusa* sp. n. Mexico p. 18, DYAR Insec. Insc. Mens. 11.

*Niccabana* gen. n. p. 180, *siculipalpis* sp. n. Formosa p. 181, STRAND Arch. Natg. 84 A 12 1920.

*Nodaria formosana* sp. n. Formosa p. 153, STRAND Arch. Natg. 83 A 10 1919.—*N. microlepidopteronis* p. 160, *epiplemoides* p. 161 spp. n. Formosa, STRAND Arch. Natg. 84 A 12 1920.

*Nolaseniola* subgen. n. see *Acantholipes*.

*Nothophila* see *Bandelia*.

*Nyctipao candidii* sp. n. Formosa p. 124, STRAND Arch. Natg. 84 A 12 1920.—*N. crepuscularis* ab. n. *noctualis* p. 135, STRAND Arch. Natg. 83 A 10 1919.—*N. albicincta obscurata* nom. n. for *N. a. obscura* p. 111, WILEMAN Entomologist 56.

*Oligia violacea* var. n. *rampartensis* p. 264 Canad. Ent. 55.—*O. iridis* sp. n. U.S.A. p. 17, DYAR Insec. Insc. Mens. 11.

*Oncocnemis benjamini* n.n. for *punctilinea* B. & L. p. 123, LINDSEY Ent. News 34.—*O. parvanigra* sp. n. British Columbia p. 215, BLACKMORE Canad. Ent. 55.

*Orrhodia vaccinii* ab. n. *caerulea cens* Austria p. (85), GALVAGNI Verh. zool.-bot. Ges. Wien 70 1920.

*Orthosia litura* ab. n. *conjuncta* Austria, p. (173), HÖFER Verh. zool.-bot. Ges. Wien 70 1920.—*O. ruticilla* ab. n. *lineata*, *lota* ab. n. *pallida* Digne p. 88, HEINRICH Beiheft D. ent. Zs. 1923.

*Orthozona karapina* sp. n. Formosa p. 178, STRAND Arch. Natg. 84 A 12 1920.

*Oslaria haematosticta* sp. n. New Mexico p. 17, DYAR Insec. Insc. Mens. 11.

*Oxyelophila* subgen. n. see *Argyractis*.

*Ozarba peraffinis* sp. n. Formosa p. 117, STRAND Arch. Natg. 84 A 12 1920.

*Pactes indefatigabilis* p. 38, *isabel* p. 39 spp. n. Galapagos Is., SCHAUS Zoologica 5.

*Panilla mila* sp. n. Formosa p. 134, STRAND Arch. Natg. 84 A 12 1920.

*Panolis griseovariegata* ab. n. *pureofusca* Austria p. (93), PREISSECKER Verh. zool.-bot. Ges. Wien 72.

*Papaipema beeriana* sp. n. p. 106, with f. n. *lacinariae* p. 107, Illinois, BIRD Can. Ent. 55.

*Parallelia (Ophiusa) muza* sp. n. Formosa p. 136, STRAND Arch. Natg. 83 A 10 1919.—*P. sylvestris* sp. n. p. 125, *simillima* var. n. *mima* p. 126, *amygdalis* var. n. *amygdaloides* p. 127 Formosa, ID. op. cit. 84 A 12 1920.

*Parangitia nigrofulgens* p. 993, *mica-pennis* p. 994 spp. n. Trinidad (figs.), KAYE Proc. Zool. Soc. 1922.

*Perigea ruthae* p. 35, *ebba* p. 36, spp. n., Galapagos Is., SCHAUS Zoologica 5.

*Perigrapha cincta* ab. n. *unimaculata*, p. (150), SCHWINGENSCHUSS Verh. zool.-bot. Ges. Wien 68 1918.—*P. puncticostata* var. n. *strigatteria* California p. 17 (figs.), HILL Bull. S. Cal. Acad. Sci. 22.

*Petilampa arcuosa* ab. n. *luciola* Bohemia p. (97), PROCHASKA Verh. zool.-bot. Ges. Wien 70 1920.

*Phaeomorpha* see *Syntheta*.

*Phaeopyra* see *Syntheta*.

*Phlegetonia pantarcha* sp. n. Queensland p. 36, TURNER Proc. R. Soc. Vict. 35 1922.

*Phytometra heberachis* p. 128, *kosempo-nensis* p. 129, *polisha* p. 130 spp. n., *agnata* var. n. *sokutsuna* p. 129 Formosa, STRAND Arch. Natg. 84 A 12 1920.—*P. (Plusia) gamma*, modern literature of, PARFENTEV Bull. Soc. ent. Moscow 2 pp. 38-44. (See *Autographa*, *Plusia*.)

*Plecoptera uniformis* var. n. *koshuna* Formosa p. 143, STRAND Arch. Natg. 84 A 12.

*Plusia*, location of certain types p. 49, OTTOLENGUI Lepidopterist Salem 2 1918.—*P. ain* ab. n. *infumata*, Germany, p. (128), SCHWINGENSCHUSS Verh. zool.-bot. Ges. Wien 67 1917.—*P. chrysitis* ab. n. *croesus* Sweden p. 116, BRYK Ent.

Tidskr. 44.—*P. bractea*, biology, p. 3, GILLMER Intern. ent. Zs. 17. (See *Autographa*, *Phytometra*.)

*Plusiodonta cupristria* sp. n. Trinidad p. 994 (fig.), KAYE Proc. Zool. Soc. 1922.

*Plusiopalpa shisa* sp. n. Formosa p. 139, STRAND Arch. Natg. 83 A 10 1919.

*Polia flavocincta* var. n. *infuscata* p. 88, PORRITT Ent. Mo. Mag. 59.

*Porphyrinia trachycornis* sp. n. Formosa p. 115, STRAND Arch. Natg. 84 A 12 1920.

*Prospalta xylocola* sp. n. Formosa p. 110, STRAND Arch. Natg. 84 A 12 1920.

*Prosthetia* gen. n. near *Periscepta*, *acrypta* sp. n. S. Australia p. 33, TURNER Proc. R. Soc. Vict. 35 1922.

*Pseudaglossa pygata* sp. n. Formosa p. 158, STRAND Arch. Natg. 84 A 12 1920.

*Pseudophia tirhaca* ab. n. *jaderensis* Adriatic coast p. 162 (fig.), STAUDER Boll. Soc. Adriat. 27 1912.

*Psorya* gen. n. p. 43, *hadesia* sp. n. p. 44 Galapagos Is., SCHAUS Zoologica 5.

*Raparna obenbergeri* p. 147, *discoin-signita* p. 148 spp. n., *erebina* var. n. *formosana* p. 149 Formosa, STRAND Arch. Natg. 84 A 12 1920.—*R. lugubris* p. 37, *crocophara* p. 38 spp. n. N. Australia, TURNER Proc. R. Soc. Vict. 35 1922.

*Rhyacia cia* sp. n. Formosa p. 129, STRAND Arch. Natg. 83 A 10 1919.—*R. interjecta* and *caliginosa*, differences, p. 46 (figs.), *pronuba* f. n. *decolorata*, Apennines, p. 49, TURATTI Atti Soc. Ital. Sci. nat. 62.

*Rhynchina blepharota* p. 167, *desquama* p. 168 spp. n. Formosa, STRAND Arch. Natg. 84 A 12 1920.

*Rivula ? dubiosa* sp. n. Galapagos Is. p. 44, SCHAUS Zoologica 5.

*Saccharophagos* gen. n. (Noctuinae), *mochisa* sp. n. Mexico p. 164, SCHAUS Proc. Ent. Soc. Wash. 25.

*Sanys implacata* sp. n. Trinidad p. 994 (fig.), KAYE Proc. Zool. Soc. 1922.

*Schinia*, life-histories, pp. 193–199, BIRD Ent. News. 34.

*Sesamia cretica* ab. n. *rufescens*, Bosnia & Herzegovina, p. 239, SCHAWERDA Verh. zool.-bot. Ges. Wien 66 1916.—*S. sokutsuana*, *kosempoana*, *creticoides* spp. n. Formosa p. 113, STRAND Arch. Natg. 84 A 12 1920.

*Scopelosoma satellitia* var. n. *olivacea* England p. 87, PORRITT Ent. Mo. Mag. 59.

*Scotogramma treitschkei* f. n. *petricolor* Appennines, p. 53, TURATI Atti Soc. Ital. Sci. nat. 62.

*Sideridis diatrecta* ab. n. *albata* N.S. Wales, *leucosta* ab. n. *vinosa* Okaba p. 189, HULSTAERT Ann. Mag. N. H. (9) 11.

*Sophia infrarubra* sp. n. Formosa p. 116, STRAND Arch. Natg. 84 A 12 1920.

*Speiredonia*, tympanal organ, p. lxxix, JORDAN Trans. Ent. Soc. 1922.

*Spragueia creton*, *plumbeata*, spp. n. Galapagos Is. p. 38, SCHAUS Zoologica 5.

*Stenhypena adustalis* var. n. *formosana*, with ab. n. *minimata* p. 156, STRAND Arch. Natg. 83 A 10 1919.

*Strathocles magnipilosa* sp. n. French Guiana p. 2, DOGNIN Hét. nouv. 22.

*Syneda divergens* early stages p. 117, DODGE Lepidopterist Salem 3 1920.

*Sygrapha egena* f. n. *galapagensis* Galapagos Is. p. 41, SCHAUS Zoologica 5.

*Syntheta* (= *Phaeopyra* and *Phaeomorpha*), *xylitis* (= *Euplexia chloeropsis* = *Phaeomorpha acineta*), *smaragdistis* (= *Euplexia smaragdina*) p. 35, TURNER Proc. R. Soc. Vict. 35 1922.

*Sypna marginalis* var. n. *ochreimarginalis* p. 139, *infrapicta* p. 140, STRAND Arch. Natg. 83 A 10 1919.—*S. kosempoana* sp. n. Formosa p. 132, ID. op. cit. 84 A 12 1920.

*Taeniocampa munda* ab. n. *kammeli* Austria p. (96), REBEL Verh. zool.-bot. Ges. Wien 72.

*Tapinostola extrema* f. *bondi*, DE JOANNIS Bull. Soc. ent. Fr. 1922 pp. 325–329 1 pl.

*Tathodelta niveigutta* sp. n. Formosa p. 120, STRAND Arch. Natg. 84 A 12 1920.

*Thalatha* (= *Molvena* Turn.), *melanophrica* sp. n. Queensland p. 36, TURNER Proc. R. Soc. Vict. 35 1922.

*Thalpocharies rosea* ab. n. *imperialis*, Dalmatia, p. (164), SCHAWERDA Verh. zool.-bot. Ges. Wien 68 1918.—*T. communimacula*, habits p. 4, JABLONOWSKI Rovart. L. 26 1922.

*Thermesia penicilligera* sp. n. Formosa p. 139, STRAND Arch. Natg. 84 A 12 1920.

*Toxocampa* (?) *alikanga* sp. n. Formosa p. 136, STRAND Arch. Natg. 84 A 12 1920.

*Trachaea* [in error for *Trachea*] *roseae*, sp. n., Galapagos Is. p. 33, SCHAUS Zoologica 5.

*Trachea smaragdistis* see *Syntheta*.

*Trichestra bicatenata* sp. n. Mexico p. 15, DYAR Insec. Insc. Mens. 11.

*Trichopolia*, Grote, synonymy p. 123, *ursina* to *Engelhardtia* gen. n. p. 125, BARNES & BENJAMIN Bull. Brooklyn Ent. Soc. 18.

*Triphaenopsis ella* sp. n. Formosa p. 107, STRAND Arch. Natg. 84 A 12 1920.

*Xanthia citrago* ab. n. *fasciata* Finland p. 10 (fig.), GRÖNBLOM Not. ent. 3.—*X. sulphurago* f. n. *schawerdae* Trieste p. 43, STAUDER Ent. Anz. 3.

*Xanthoptera* (?) *apoda* p. 111, *tortricodina* p. 112 spp. n. Formosa, STRAND Arch. Natg. 84 A 12 1920.

*Xylormisa* gen. n. *louisiana* sp. n. p. 101 Louisiana, FORBES Ent. News 33 1922.

*Zanclognatha subtriplex* sp. n. Formosa, *vermiculata* f. n. *feminina*, p. 152, STRAND Arch. Natg. 83 A 10 1919.

*Zethes fuhoshana*, *nagadeboides* p. 152, *pericymatis* p. 154, spp. n. Formosa, STRAND Arch. Natg. 84 A 12 1920.

#### LIPARIDAE.

A Revision of the Liparidae, pp. 47–97, 289–304, 400–442, SWINHOE Ann. Mag. N. H. (9) 11.

*Caelicola* gen. n., *rostrata* sp. n. Amazonas p. 4, DOGNIN Hét. nouv. 22.

*Coenostegia culminidentata* p. 140,  
*timoleon* p. 141, *paulinus*, *placidus*  
 p. 142, *conglomerata* p. 144 spp. n.  
 Madagascar (figs.), OBERTHÜR Études  
 Lép. 21 pt. 2.

*Dactylorhynchides* gen. n., *limacodiformis* sp. n. Formosa p. 185, STRAND  
 Arch. Natg. 84 A 12 1920.

*Dasychira ornata* sp. n. Madagascar  
 p. 145 (fig.), OBERTHÜR Études Lép. 21  
 pt. 2.—*D. selenitica*, biology, p. 13,  
 WOHNIG Intern. ent. Zs. 17.—*D. grata*  
 sp. n. Philippines p. 190, HULSTAERT  
 Ann. Mag. N. H. (9) 11.

*Eloria nigella* p. 7, *moeschleri*, *ninya*  
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 DOGNIN Hét. nouv. 21.—*E. opaca*,  
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 cit. 22.—*E. albifasciata* sp. n. Amazonas  
 p. 5, Id. op. cit. 24.

*Leucoma*, corrections to synonymy of  
 species in Seitz, VAN EECHE Ent. Ber.  
 Ned. Ent. Vereen. 6 pp. 175–176.—  
*L. submarginata* f. n. *keiana* Little Kei,  
 p. 190, HULSTAERT Ann. Mag. N. H.  
 (9) 11.

*Lymantria monacha* ab. n. *brunnea*  
 p. 40 no locality, STIPAN Ent. Zs. 37.—  
*L. dispar* see *Porthetria*.

*Mantruda modesta* sp. n. Amazonas  
 p. 4, DOGNIN Hét. nouv. 22.

*Numenes aurantiaca* sp. n. Madagascar  
 p. 144, OBERTHÜR Études Lép. 21  
 pt. 2.

*Orgyia dubia* n. race *acerii* Sicily  
 p. 19, RAGUSA Boll. Soc. ent. ital. 15.—  
*O. gonostigma* ab. n. *flavescens* (fig.)  
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 Pismo Ent. 2.—*O. lixivia* sp. n. Bolivia  
 p. 10, DOGNIN Hét. nouv. 21.—*O.  
 trigoteprhas calabria* phenology, Inns-  
 bruck p. 31, STAUDER Ent. Anz. 3.

*Phiditia unimoda* sp. n. S. America  
 p. 10, DOGNIN Hét. nouv. 21.

*Porthetria dispar* gynandromorph,  
 (fig.) p. 12, CASSINO Lepidopterist Salem  
 2 1918.—*P. dispar* intersex, p. 100,  
 GOLDSCHMIDT Zs. indukt. Abstammungs-  
 lehre 31 1923.

*Trochuda limula* sp. n. Amazonas p. 9,  
 DOGNIN Hét. nouv. 21.—*T. crassilinea*  
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#### HYPSIDAE.

*Euthoracia* gen. n. type (*Caryatis*)  
*syntomina* Btl. p. 411, HULSTAERT Rev.  
 zool. afr. 11.

#### PERICOPIDAE.

*Centronia joiceyi* p. 10, *rhea*, *rhamses*  
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 DOGNIN Hét. nouv. 23.—*C. plorator*  
 sp. n. Trinidad p. 991 (fig.), KAYE Proc.  
 Zool. Soc. 1922.

*Pericopis philothomia* sp. n. Venezuela  
 p. 12, KAYE Proc. Ent. Soc. 1922.—  
*P. joiceyi* p. 4, *talboti* p. 5 spp. n. S.  
 America, DOGNIN Hét. nouv. 20 1922.—  
*P. nigriventralis* sp. n. Amazonas p. 12,  
 Id. op. cit. 23.

#### SPHINGIDAE.

Corrections to some Indo-Malayan  
 Sphingidae pp. 51–54, JORDAN Ent.  
 Mitt. 12.

*Amorpha populi* subsp. n. *philerema*  
 Bokhara p. 104 (figs.), DJAKONOV Ann.  
 Mus. zool. Acad. Sci. Russ. 24.

*Amphypterus globifer* Dyar female  
 described, Mexico p. 50, CLARK Proc.  
 New Engl. Zool. Cl. 8.

*Antinephele weberi* sp. n. Kamerun  
 p. 64, CLARK Proc. New Engl. Zool. Cl.  
 8.

*Cechenena pollux* f. n. *rubrescens*  
 S.W. Sumatra p. 74, CLARK Proc. New  
 Engl. Zool. Cl. 8.

*Celerio mauritanica*, in Egypt, PET-  
 ROFF Bull. Soc. R. ent. Egypte 1922 pp.  
 35–37.

*Cephonodes banksi* sp. n. Philippines  
 p. 75, CLARK Proc. New Engl. Zool. Cl.  
 8.

*Cizara schausi* sp. n. no locality p. 61,  
 CLARK Proc. New Engl. Zool. Cl. 8.

*Deilephila placida rosacea* Roth. not  
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 CLARK Proc. New Engl. Zool. Cl. 8.

*Gurelca mulleri* sp. n. Mexico p. 64,  
 CLARK Proc. New Engl. Zool. Cl. 8.

*Haemorrhagia tityus* subsp. n. *aksana*  
 Morocco p. 199, LE CERF Bull. Soc. ent.  
 Fr. 1923.

*Hemaris fuciformis* aberration p. 195 (fig.), FROHAWK Entomologist 56.

*Hemeroplanes gracilis* sp. n. Cuba p. 55 (fig.), JORDAN Ent. Mitt. 12.

*Hippotion noel* Christmas Isl., *lambertoni* S.E. Madagascar p. 68, spp. n., CLARK Proc. New Engl. Zool. Cl. 8.—*H. chauchowensis* sp. n. S. China p. 159, MELL D. ent. Zs. 1923.

*Hopliocneme marmorata* redescribed p. 38, TURNER Proc. R. Soc. Vict. 35 1922.

*Isognathus zebra* sp. n. Brazil p. 54, CLARK Proc. New Engl. Zool. Cl. 8.

*Kloneus* gen. n. (near *Pachysphinx* R. & J.) for *babayaga* sp. n. Nicaragua p. 138, SKINNER Ent. News 34.

*Macroglossum vicinum* sp. n. N. Kanara p. 189, JORDAN Nov. Zool. 30.—*M. semifasciata nigellum* R. & J. female described, Papua p. 66, CLARK Proc. New Engl. Zool. Cl. 8.

*Marumba dyras* subsp. n. *plana* S.E. China p. 54, *sperchius* subsp. n. *sumatranus* S.W. Sumatra p. 71, CLARK Proc. New Engl. Zool. Cl. 8.

*Meganoton analis* subsp. n. *subalba* S.E. China p. 48, CLARK Proc. New Engl. Zool. Cl. 8.

*Nephele joiceyi* sp. n. S.W. Sumatra p. 73, *accentifera* subsp. n. *comoroana* Grande Comoro Isl. p. 61, CLARK Proc. New Engl. Zool. Cl. 8.

*Oberthurion* gen. n. *harroverii* sp. n. Costa Rica p. 58, CLARK Proc. New Engl. Zool. Cl. 8.

*Orecta acuminata* sp. n. Argentina p. 51, CLARK Proc. New Engl. Zool. Cl. 8.

*Oxyambulyx brooksi* p. 52, *joiceyi* p. 70 spp. n. S.W. Sumatra, *sericeipennis* f. n. *brunnea* S.E. China p. 52, CLARK Proc. New Engl. Zool. Cl. 8.—*O. meeki* subsp. n. *pyrrhina* Solomon Is. p. 52, JORDAN Ent. Mitt. 12.—*O. belli* p. 186 (figs.), *matti* spp. n., *substrigilis* subsp. n. *aglaia* N. Kanara p. 188, JORDAN Nov. Zool. 30.

*Panacra psaltria* sp. n. Borneo p. 268 (figs.), JORDAN Nov. Zool. 30.—*P. nasana* p. 60, *angulata* p. 72 spp. n. Sumatra, CLARK Proc. New Engl. Zool. Cl. 8.

*Phlegetontius sexta*, urinary system, pp. 365–369 (fig.), VANSSELL Kansas Univ. Sci. Bull. 14 1922.

*Polyptychus erosus* sp. n. Kilimanjaro p. 54 (fig.), JORDAN Ent. Mitt. 12.—*P. neavei* Hamps. & *P. martha* not synonymous with *P. calcareus* p. 57, CLARK Proc. New Engl. Zool. Cl. 8.

*Protoparce scutata* subsp. n. *boliviiana* Bolivia p. 48, CLARK Proc. New Engl. Zool. Cl. 5.

*Rhagastis mjöbergi* sp. n. Sumatra p. 69, CLARK Proc. New Engl. Zool. Cl. 8.

*Sphecodina caudata* subsp. n. *angulilimbata* S.E. China p. 66, CLARK Proc. New Engl. Zool. Cl. 8.

*Sphinx tricolor* sp. n. W. Indies p. 49, CLARK Proc. New Engl. Zool. Cl. 8.—*S. vancouverensis* Edw., identity p. 147, *mordecai* sp. n. Canada p. 148, McDUNNOUGH Canad. Ent. 55.

*Tlemnora camerounensis* sp. n. Kameruns p. 62, CLARK Proc. New Engl. Zool. Cl. 8.

*Theretra cajus* subsp. n. *ugandae* Kenya p. 67, CLARK Proc. New Engl. Zool. Cl. 8.

*Xylophanes juanita* R. & J. female described, Honduras p. 66, *schreiteri* Argentina p. 67, *transpacifica* Philippines p. 75 spp. n., CLARK Proc. New Engl. Zool. Cl. 8.

#### ENDROMIDAE.

*Endromis versicolora*, copulation of, p. 2, AICHELE Soc. ent. 39.

#### THYATIRIDAE.

*Polyploca flavigornis* ab. n. *confusa* p. 128, ab. n. *obsoleta* p. 131 (figs.) Poland, MASLOWSCY Polskie Pismo Ent. 2.

#### NOTODONTIDAE.

*Anaphe*, irritation caused by larval hairs pp. 311–318, POMEROY Bull. Imp. Inst. London 19 1921.

*Anita definita* sp. n. S. America p. 15, DOGNIN Hét. nouv. 20 1922.

*Apela lilacina* sp. n. French Guiana p. 14, DOGNIN Hét. nouv. 23.

*Boriza kalodonta* sp. n. Trinidad p. 992 (fig.), KAYE Proc. Zool. Soc. 1922.

*Chadisra hollandi* sp. n. French Guiana p. 87 (fig.), SCHAUß Ann. Carnegie Mus. 15.—*C. ocreata* sp. n. Bolivia p. 14, DOGNIN Hét. nouv. 20 1922.

*Cleapa latifascia* var. n. *formosae* p. 186, STRAND Arch. Natg. 84 A 12 1920.

*Dasylophia improvisa* sp. n. Amazonas p. 11, DOGNIN Hét. nouv. 21.

*Datana palmi* larva described p. 127, BEUTENMÜLLER Lepidopterist Salem 3 1920.—*D. chiriquensis* larva described p. 102, BUCKHOLTZ Lepidopterist Salem 3 1919.—*D. perspicua discalis* California p. 10, *perspicua eileena* subsp. n., *perfusa* f. n. p. 11, Arizona, DYAR Insec. Insc. Mens. 11.

*Dicentria nondescripta* sp. n. Trinidad p. 991 (fig.), KAYE Proc. Zool. Soc. 1922.—*D. praealta* sp. n. Amazonas p. 7, DOGNIN Hét. nouv. 22.

*Dicranura vinula*, growth of larva p. 251 (figs.), WALSH Trans. Ent. Soc. 1923.

*Disphragis viror* sp. n. S. America p. 12, DOGNIN Hét. nouv. 21.—*D. camilla* sp. n. Amazonas p. 7, Id. t.e. 22.

*Drymonia trimacula* ab. n. *intermedia* Bosnia & Herzegovina p. 237, SCHÄFER Verh. zool.-bot. Ges. Wien 66 1916.

*Farigia beneficta* sp. n. French Guiana p. 85 (fig.), SCHAUß Ann. Carnegie Mus. 15.—*F. conspersata* sp. n. Bolivia p. 5, DOGNIN Hét. nouv. 19 1920.

*Hemiceras stigmata* sp. n. Bolivia p. 6, DOGNIN Hét. nouv. 19 1920.—*H. variegata* p. 14, *nupera* spp. n., *leucospila* var. n. *nivosa* p. 15 S. America, Id. op. cit. 21.—*H. cadmiodes* p. 8, *congrua*, *semilacea* p. 9, *rufula* p. 10, *colorata* p. 11, *perbrunnea* spp. n., *constellata* var. n. *albescens* p. 12 S. America, *nigrigutta* Schaus (= *yuntasa* Dogn.). p. 25, Id. op. cit. 22.—*H. flavorufa* sp. n. S. America p. 14, Id. op. cit. 23.—*H. levana* subsp. n. *amazonica* Amazonas p. 8, Id. op. cit. t.e. 24.

*Hyperaeschra tropicalis* sp. n. French Guiana p. 88 (fig.), SCHAUß Ann. Carnegie Mus. 15.

*Kalkoma cynedryda* sp. n. French Guiana p. 82 (fig.), SCHAUß Ann. Carnegie Mus. 15.

*Lepasta magnistrigata* sp. n. Bolivia p. 13, DOGNIN Hét. nouv. 23.

*Lobeza fassli* sp. n. Bolivia p. 15, DOGNIN Hét. nouv. 20 1922.

*Malocampa ecpantherioides* Schaus (= *M. muscipilosa* Dogn.) p. 25, DOGNIN Hét. nouv. 22.

*Marthantia* gen. n., *stelligera* sp. n. French Guiana (fig.), SCHAUß Ann. Carnegie Mus. 15 pp. 80–90.

*Meragisa boliviiana* sp. n. Bolivia p. 5, DOGNIN Hét. nouv. 19 1920.

*Misogada tridiscata* sp. n. Amazonas p. 12, DOGNIN Hét. nouv. 21.

*Moresa obliquifascia* Roths. not synonym of *Rosema magniplaga* Schaus 1922, p. 16 Id. op. cit. 20 1922.

*Notodonta korbi* sp. n. (fig.), N. Syria, p. (157), REBEL Verh. zool.-bot. Ges. Wien 68 1918.—*N. ziczac* ab. n. *tristis* (fig.) Poland p. 133, MASLOWSCY Polskie Pismo Ent. 2.

*Notoplusia oyapoca* p. 85, *boliviensis* p. 86 spp. n. S. America (figs.), SCHAUß Ann. Carnegie Mus. 15.

*Nystalea albipicta* p. 80, *arimatha* p. 81 spp. n. French Guiana (figs.), SCHAUß Ann. Carnegie Mus. 15.—*N. alba* sp. n. S. America p. 14, DOGNIN Hét. nouv. 20 1922.

*Odontosia sieversii*, life-history p. 69, DU BOIS-REYMOND Zs. wiss. Insektenbiol. 18.

*Odoxia* gen. n. p. 10, *concocta* p. 11 spp. n. French Guiana, DOGNIN Hét. nouv. 21.

*Phalera bucephala* ff. n. *philonica* p. 264, *defecta* p. 265 Illyro-Adriatic region, STAUDER Zs. wiss. Insektenbiol. 18.

*Phastia maricolor* sp. n. Trinidad p. 992 (fig.), KAYE Proc. Zool. Soc. 1922.

*Pseudantiora indiscreta* sp. n. Amazonas p. 6, DOGNIN Hét. nouv. 22.

*Rifargia brunnipennis* sp. n. Trinidad p. 992 (fig.), KAYE Proc. Zool. Soc. 1922.—*R. elgiva* sp. n. French Guiana p. 87 (figs.), SCHAUß Ann. Carnegie Mus. 15.

*Rosema deolis* var. n. *brunnescens* Amazonas p. 12, DOGNIN Hét. nouv. 22.—*R. magniplaga* Schaus see *Moresa obliquifascia* Roths.

*Schizura apicalis* larva described p. 133, BEUTENMULLER Lepidopterist Salem 3 1920.

*Talmecea offa* sp. n. Bolivia p. 86 (fig.), SCHAUSS Ann. Carnegie Mus. 15.—*T. dubiosa* sp. n. Amazonas p. 8, DOGNIN Hét. nouv. 22.

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#### GEOMETRIDAE.

*Abraxas grossulariata* synonymy of British forms p. 156, PORRITT Ent. Rec. 35 1923.—*A. grossulariata* abb. n. *aberdoniensis*, *antemarginata*, *nigro-apicata* England, *postmarginata*, *nigro-lineata* (no locality) p. 140, var. *lacticolor* ab. n. *subangulata* (no locality), var. *varleyata* ab. n. *nigrocretacea* England p. 141, RAYNOR Ent. Rec. 35.

*Acasis februalis* sp. n. California p. 21, DYAR Insec. Insc. Mens. 11.

*Acidalia sericeata* var. n. *altivolaria* p. (30), ab. n. *extrema*, *herbariata* ab. n. *mediofasciata*, *rubiginata* ab. n. *scotina* p. (31) Corsica, BUBAÖEK Verh. zool.-bot. Ges. Wien 72.—*A. chretieni* n. n. for *bucephalaria* B. & McD. p. 17, Barnes & BENJAMIN Lepidopterist 4.—*A. charitata* sp. n. Teneriffe p. (152), REBEL Verh. zool.-bot. Ges. Wien 64 1914.—*A. rubiginata* ab. n. *bruneomarginata* Bosnia & Herzegovina, p. 241, SCHÄFERDA Verh. zool.-bot. Ges. Wien 66 1916.—*A. caricaria* ab. n. *anonyma*, Mecklenberg p. (96), SCHÄFERDA Verh. zool.-bot. Ges. Wien 70 1920.—*A. bisetata* ab. n. *griseata*, *aversata* f. n. *dilutata* p. (93), *dilutaria*, *interjectaria*, *deversaria*, *remutaria*, f. n. *anastomosaria* (for each of the 4 species) p. (94) Austria, PREISSECKER Verh. zool.-bot. Ges. Wien 72.

*Amphidasis cognataria* n. race *contrasta* Utah p. 12, BARNES & BENJAMIN Lepidopterist 4.

*Anaitis efformata* Guen., a distinct sp. p. 243 (figs.), JORDAN Nov. zool. 30.

*Anemplozia melambathes* sp. n. Peru p. 203, FROUNT Nov. Zool. 30.

*Angerona prunaria* ab. n. *selectaria* p. (156) (fig.), REBEL Verh. zool.-bot. Ges. Wien 64 1914.—*A. prunaria* ab. n. *ochreata* Austria p. (91), SCHÄFERDA Verh. zool.-bot. Ges. Wien 72.

*Animomyia increscens* sp. n. California p. 24, DYAR Insec. Insc. Mens. 11.

*Anisodes palingenes* sp. n. Peru p. 308, PROUT Ann. Mag. N. H. (9) 11.—*A. eoraria* sp. n. S. America p. 216 (fig.), OBERTHÜR Études Lép. 20.

*Anisopteryx aescularia*, biology, p. 22, GELPKÉ Intern. ent. Zs. 17.

*Argyris mayottaria* sp. n. Comoro Is. p. 219 (fig.), OBERTHÜR Études Lép. 20.

*Artemidora symmetrica* sp. n. Turkestan p. 119 (figs.), DJAKONOV Ann. Mus. zool. Acad. Sci. Russ. 24.

*Arycanda hypanis* subsp. n. *tenuisignata* New Guinea p. 208, PROUT Nov. Zool. 30.

*Aspilates strigillaria* ab. n. *armoris* Brittany p. 281 (fig.), OBERTHÜR Études Lép. 20.

*Astyochia dentilinea* sp. n. Brazil p. 10, DOGNIN Hét. nouv. 19 1920.

Axiidae, fam. n. for *Axia* & *Epici-melia*, p. (112), REBEL Verh. Zool.-bot. Ges. Wien 69 1919.

*Bandobena apicalis* subsp. n. *pyrigona* N. Celebes p. 208, PROUT Nov. Zool. 30.

*Bapta angelica* sp. n. Cuba p. 153, SCHAUSS Ins. Insc. Mens. 11.—*B. virginialis* sp. n. Texas p. 23, CASSINO & SWETT Lepidopterist 4.

*Bassania jocosa* Cochabamba p. 166, schreiteri Argentina p. 167, spp. n., SCHAUSS Ins. Insc. Mens. 11.

*Bichroma famula* subsp. n. *brunnea* Morocco p. 198, LE CERF Bull. Soc. ent. Fr. 1923.

*Biston graecarius* var. n. *odrinarius* Adrianople p. 53, BURESCH Bulg. Ak. Wiss. 12 1915.—*B. strataria* ab. n. *striaria* (fig.) Istria, p. (137), PROCHASKA Verh. zool.-bot. Ges. Wien 69 1919.

*Boarmia manuelaria* subsp. n. *maghrebica* Morocco p. 198, LE CERF Bull. Soc. ent. Fr. 1923.—*B. selenaria* ab. n. *nigrofasciata* Klosterneuburg p. (156), HOFER Verh. zool.-bot. Ges. Wien 68 1918.—*B. selenaria* ab. n. *eutaenaria* (fig.) S. Steiermark p. (136), PROCHASKA Verh. zool.-bot. Ges. Wien 69 1919.—*B. cinctaria* ab. n. *adustaria* p. (94) Austria, PREISSECKER Verh. zool.-bot. Ges. Wien 72.—*B. subdetractaria* nom. n. for *detractaria* Walk. p. 211, PROUT Nov. Zool. 30.—*B. consortaria* ab. n. *fasciata*, *roboraria* ab. n. *extincta* (fig.) Mediterranean p. (43), WAGNER Verh. zool.-bot. Ges. Wien 70 1920.

*Bordeta*, sexual dimorphism & mimicry in, p. xci, *posticigutta* subsp. n. *decocata* Buru p. xciii, PROUT Proc. Ent. Soc. 1922.—*B. bursadooides* subsp. n. *dignitosa* Goodenough Is. p. 209, PROUT Nov. Zool. 30.

*Brachyglossina* gen. n. near *Acidalia* p. (172), *acidalaria* sp. n. p. (173) Tunisia, WAGNER Verh. zool.-bot. Ges. Wien 64 1914.

*Brephos infans* var. n. *oregonensis* Oregon p. 78, SWETT Lepidopterist Salem 1 1917.—*B. puella* ab. n. *latevirgata* p. (91), KITT Verh. zool.-bot. Ges. Wien 70 1920.—*B. parthenias* ab. n. *muliercula* Silesia p. 85, STEPHAN Intern. ent. Zs. 17.

*Bronchelia repressa* sp. n. S. America p. 319, PROUT Ann. Mag. N. H. (9) 11.

*Bupalus piniarius* ab. n. *bupaloides* Germany p. 34, STRAND Arch. Natg. 85 A 4 1920.

*Calocalpe intersita* sp. n. French Guiana p. 200, PROUT Nov. Zool. 30.

*Carsia boreata* var. n. *thaxteri* U.S.A. p. 45, SWETT Lepidopterist Salem 1 1917.—*C. paludata* ab. n. *8-signata* Germany p. 25, STRAND Arch. Natg. 85 A 4 1920.

*Cephalis advenaria* f. n. *rectilinea* Europe p. 34, STRAND Arch. Natg. 85 A 4 1920.

*Chesias spartiata* var. n. *isabella* Pyrenees p. (86) (fig.), SCHAWERDA Verh. zool.-bot. Ges. Wien 65 1915.

*Chloroclystis punicea*, sp. n. N. Zealand p. 148, PHILPOTT Trans. N. Z. Inst. 54.

*Chlorosea naidaria* sp. n. California p. 10, SWETT Lepidopterist Salem 1 1916.

*Cidaria albulata* ab. n. *nidarosiensis* Germany p. 26, *minorata* var. *norvegicola* nom. n. for *norvegica* Str., *variata* ab. n. *juniperoides* p. 27, *didymata* abb. n. *albidissima*, Norway, *brockenensis* Germany p. 28, *taeniata* var. n. *brönnöensis* Norway p. 30, *bilineata* ab. n. *sublineata* p. 31, *unidentaroides* p. 32 Germany, STRAND Arch. Natg. 85 A 4 1920.—*C. designata* ff. n. *binderi* Innsbruck, *hafneri* Krain p. 113, STAUDER Intern. ent. Zs. 17.

*Cidariophanes daphne* sp. n. Bolivia p. 10, DOGNIN Hét. nouv. 19 1920.

*Cirrhorrheuma androconia* sp. n. Peru p. 198, PROUT Nov. Zool. 30.

*Cleora melanocarpa* sp. n. California p. 5, SWETT Lepidopterist Salem 1 1916.—*C. exhumata* sp. n. California p. 82, ID. op. cit. 2 1918.—*C. grisea* subsp. n. *vandervoordeni* China p. 319, PROUT Ann. Mag. N. H. (9) 11.

*Codonia punctaria* ab. n. *erythrescens* Austria p. (94), PREISSECKER Verh. zool.-bot. Ges. Wien 72.

*Coenocharis albata* p. 5 California, *spaldingata* (with new race *jemezata*) Utah spp. n. New Mexico p. 6, CASSINO & SWETT Lepidopterist 4.

*Collix basicristata* sp. n. S. Flores p. 205, *multifilata* subsp. n. *infesta* Louisiades p. 207, PROUT Nov. Zool. 30.

*Colotis pennaria* ab. n. *flavescens* Austria p. (91), SCHAWERDA Verh. zool.-bot. Ges. Wien 72.

*Cophocerotis inconjuncta* sp. n. Colombia p. 23, DOGNIN Hét. nouv. 23.

*Corycia eximiaria* p. 234, *polydama* p. 235, *diaphanaria*, *polyalaria* p. 236, *pollentaria*, *polyobotaria*, *policaria* p. 237, *pomenaria*, *pnocaria*, *jardanaria* p. 238 spp. n. Chinese Thibet (figs.), OBERTHÜR Études Lép. 20.

*Cosmethylis woodfordii* subsp. n. *disparilis* Solomon Is. p. 208, PROUT Nov. Zool. 30.

*Cosymbia lilacinipes* sp. n. Madeira p. 163, SCHAUER & COCKERELL Proc. Ent. Soc. Wash. 25.

*Craspedosis flavimedia* subsp. n. *auriflua* Goodenough Is., *transtinens* sp. n. New Guinea p. 209, PROUT Nov. Zool. 30.

*Dasystole tenax* sp. n. Bolivia p. 12, DOGNIN Hét. nouv. 19 1920.

*Dasyurius octans* sp. n. N. Z. p. 179, HUDSON Ent. Mo. Mag. 59.

*Desmoclystia* gen. n. type *Xenoclystia unipuncta* Warr. p. 204, *prodicia* sp. n. New Guinea p. 205, PROUT Nov. Zool. 30.

*Devarodes xeron* sp. n. Bolivia p. 7, DOGNIN Hét. nouv. 19 1920.

*Dolichoneura missionis* sp. n. Argentina p. 305, PROUT Ann. Mag. N. H. (9) 11.

*Dooabia puncticostata* sp. n. Selangor p. 306, PROUT Ann. Mag. N. H. (9) 11.

*Drepanodes santiago* sp. n. Cuba p. 159, SCHAUS Ins. Insc. Mens. 11.

*Drepanoptera* Turati see *Drepanopterula*.

*Drepanopterula* n.n. for *Drepanoptera* Turati (nec Rothschild) p. 72, HEDICKE D. ent. Zs. 1923.

*Dyspteris formosa*, *subvariata* spp. n. S. America p. 17, DOGNIN Hét. nouv. 21.

*Dysstroma mackieata* sp. n. Alberta p. 20, CASSINO & SWETT Lepidopterist 4.

*Electrophaës* gen. n. type *Geometra corylata* Thnbg. p. 197, *chryophaës* sp. n. N. India p. 198, PROUT Nov. Zool. 30.

*Ematurga atomaria* ab. n. *unimarginata* Westphalia p. 213, CORNELSEN Intern. ent. Zs. 16.—*E. atomaria* ab. n. *gynaekoides* Digne p. 112, HEINRICH Beiheft D. ent. Zs. 1923.—*E. atomaria* ab. n. *brunnea* (fig.) Poland p. 133, MASLOWSCY Polskie Pismo Ent. 2.

*Enypia veneta* ab. n. *elaborata* Brit. Columbia p. 13, *coolidyi* sp. n. California p. 15, CASSINO & SWETT Lepidopterist 4.

*Eois ingrataria* subsp. n. *tambora* Tambora, *suarezensis* sp. n. Madagascar p. 193, PROUT Nov. Zool. 30.

*Epicosymbia spectrum* sp. n. E. Africa p. 192, PROUT Nov. Zool. 30.

*Epione advenaria* ab. n. *fasciata*, Austria, p. (151), SCHWINGENSCHUSS Verh. zool.-bot. Ges. Wien 68 1918.

*Erannis vancouverensis* brunneata melanic form p. 21, CASSINO & SWETT Lepidopterist 4.

*Erastria argentula* ab. n. *nowickii* p. 109, SCHILLE Polskie Pismo Ent. Lemberg 2.

*Erateina prodiga* sp. n. Peru p. 203, PROUT Nov. Zool. 30.—*E. haenschi* sp. n. Ecuador p. 311, PROUT Ann. Mag. N. H. (9) 11.

*Euacidalia balistraria* subsp. n. *moriaria* California p. 20, DYAR Insec. Insc. Mens. 11.

*Euclysia angustitincta*, *maurusaria* spp. n. Guatemala p. 160, SCHAUER Ins. Insc. Mens. 11.

*Eucosmia certata* var. n. *hawelkae* Herzegovina p. (87) (fig.), SCHAUER Ins. Verh. zool.-bot. Ges. Wien 65 1915.—*E. certata* abb. n., *variegata*, *unicoloraria* Austria, p. (152), SCHWINGENSCHUSS Verh. zool.-bot. Ges. Wien 68 1918.—*E. certata* ab. n. *mediofasciata* p. (34), BUBAČEK Verh. zool.-bot. Ges. Wien 72.—*E. undulata* ab. n. *medioalba* (fig.) Poland p. 131, MASLOWSCY Polskie Pismo Ent. 2.

*Eudule schausi* sp. n. Peru p. 16, DOGNIN Hét. nouv. 20 1922.

*Eumera regina* ab. n. *decoronata* Adriatic coast p. 167 (fig.), STAUDER Boll. Soc. Adriat. 27 1912.

*Eupithecia sobrinata* ab. n. *albiplaga*, Lower Austria, p. (48), SPITZ Verh. zool.-bot. Ges. Wien 67 1917.—*E. probata* p. 105, *moirata* p. 106, *geneura* p. 108, *zela* p. 109, *zelmira* p. 113 spp. n. N. America, SWETT & CASSINO Lepidopterist Salem 3 1919.—*E. herfordaria* Arizona p. 18, *bowmani* Alberta p. 19, spp. n., CASSINO & SWETT Lepidopterist 4.—*E. subinduta* sp. n. Ecuador p. 313, PROUT Ann. Mag. N. H. (9) 11.

*Eutrepisia neonympha* p. 200, *gadowi* spp. n. Mexico p. 201, PROUT Nov. Zool. 30.

*Fernaldella fimetaria* f. n. *angelata* Lower California p. 114, WRIGHT Proc. Cal. Acad. Sci. 12.

*Fidonia bieti* sp. n. Chinese Thibet p. 273 (fig.), OBERTHÜR Études Lép. 20.—*F. pennigeraria* subsp. n. *atlanticaria*, *plumistraria* subsp. n. *moriscaria* Morocco p. 199, LE CERF Bull. Soc. ent. Fr. 1923.—*F. roraria* ab. n. *nigrescens* Austria p. (95), PREISSECKER Verh. zool.-bot. Ges. Wien 72.

*Geometra corylata* see *Electrophaës*.

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*Gonanticlea meridionata* subsp. n. *nesaea* Comoro Is. p. 197, PROUT Nov. Zool. 30.

*Graefia smithii* new race *nigris* Utah p. 24, CASSINO & SWETT Lepidopterist 4.

*Gymnoscelis inexpressa* sp. n. Assam p. 312, PROUT Ann. Mag. N. H. (9) 11.

*Heterophlebs confusella* nom. n. (confusa Prout nec Will.) p. 186, *confusa* ab. n. *punkikonis* Formosa p. 187, STRAND Arch. Natg. 84 A 12 1920.

*Hoplosauris limnetes* sp. n. Patagonia p. 208, PROUT Nov. Zool. 30.

*Horisme leucotmeta* p. 205, *symmetronota*, *genuflexa* spp. n. Dutch New Guinea p. 206, PROUT Nov. Zool. 30.

*Hybernia defoliaria* ab. n. *albescens*, Bosnia and Herzegovina, p. 371, SCHÄWERDA Verh. zool.-bot. Ges. Wien 64 1914.—*H. bajara* ab. n. *unicolor*, *defoliaria* ab. n. *eutaenaria*, Herzegovina, p. 244, Id. t.c. 66 1916.

*Hydata opella* p. 21, *notula* p. 22 spp. n. Bolivia, DOGNIN Hét. nouv. 23.—*H. digma* sp. n. Bolivia p. 9, Id. t.c. 24.

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*Larentia juniperata* var. n. *istriana* p. 101 (fig.), NAUFOCK Boll. Soc. Adriat. 27 1 1913.—*L. olivata* ab. n. *desolivata*, p. 368, *sordidata* ab. n. *roseoolivacea*, p. 369, Bosnia and Herzegovina, SCHÄWERDA Verh. zool.-bot. Ges. Wien 64 1914.—*L. achromaria* ab. n. *albomarginata* p. (16), *pupillata* ab. n. *defasciata* p. (17) no locality, HIRSCHKE op. cit. 67 1917.—*L. turbata* ab. n. *latifasciata*, p. (152), *flavicinctata* ab. n. *hilarata* p. (153) Austria, *frustator* ab. n. *griseator*, p. (154), Switzerland, SCHWINGENSCHEUER op. cit. 68 1918.—*L. salicata* ab. n. *nigrotinctata*, S. Tirol, p. (96), SCHÄWERDA op. cit. 70 1920.—*L. variata* abb. n. *albonigrata*, p. (20), *costimaculata*, *grisescens* p. (21), *reducta* p. (22), Austria, HÖFER op. cit. 70 1920.—*L. immanata* ab. n. *nigerrima*, Italy, p. (95), SCHÄWERDA op. cit. 70 1920.—*L. variata*, *obeliscata*, biological notes pp. 308–310, LAVALLÉE Bull. Soc. ent. Fr. 1922.—*L. variata* var. n. *diniensis* Digne p. 102, HEINRICH Beiheft D. ent. Zs. 1923.—*L. juniperata* ab. n. *minor* (fig.) Poland p. 133, MASLOWSCY Polskie Pismo Ent. 2.—*L. bilineata* abb. n. *insignata*, *brunneata*, *coffeata*, *phaeotaeniata* p. (31), *anaemica*, *bubaceki*, *stygiata* p. (32) Corsica, KAUTZ in BUBAČEK Verh. zool.-bot. Ges. Wien 72.—*L. bicolorata* ff. n. *diadelphata*, *peralbata*, *rosarium* Innsbruck p. 92, STAUDER Intern. ent. Zs. 17.—*L. irma*, *oculisigna* spp. n. Patagonia p. 196, PROUT Nov. Zool. 30.—*L. pupillata* notes on, Württemberg p. 99, SCHNEIDER Intern. ent. Zs. Čubén 17.—*L. hastata*, larva described pp. 161–163, OUDEMANS Ent. Ber. Ned. Ent. Vereen. 6.

*Leucolithodes tincara* sp. n. Bolivia p. 11, DOGNIN Hét. nouv. 19 1920.

*Liodes tibiaria* var. n. *aïndrahama* Tunis p. 255 (fig.), OBERTHÜR Études Lép. 20.

*Lithostege interstincta* sp. n. Kenya p. 201, PROUT Nov. zool. 30.—*L. angelicata* sp. n. California p. 21, DYAR Insec. Insc. Mens. 11.

*Lobocraspeda coeruleostriga* subsp. n.  
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*Lobophora seritata* abb. n. *dissoluta*,  
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Austria, HÖFER Verh. zool.-bot. Ges.  
Wien 70 1920.—*L. simsata* sp. n.  
Canada p. 123, SWETT Lepidopterist  
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*Lomaspilis marginata* ab. n. *disco-*  
*cellularis* Norway p. 34, STRAND Arch.  
Natg. 85 A 4 1920.

*Lygris pyraliata* ab. n. *aurantiodeleta*,  
p. (29), SCHAWERDA Verh. zool.-bot.  
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*Lythria purpuraria*, *purpurata*, dis-  
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*Marmopteryx watsoni* sp. n. Colorado  
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*Melanolophia signataria* ab. n. *car-*  
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*Melinodes priscanaria* sp. n. Guate-  
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11.—*M. simplaria* sp. n. Colombia p.  
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*Mesotype virgata* ab. n. *mediofasciata*,  
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*Milionia xanthobathra*, *isodoxa* spp. n.  
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*Neolexia ximena* sp. n. Philadelphia  
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*Nephodia luctifera* sp. n. Bolivia p. 7,  
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*Nipteria bisecta*, *insipida* p. 8, *parva*,  
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*Notoreas ortholeuca* sp. n. New  
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*Ortholitha coarctata* ab. n. *impleta*  
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*S. hypophlebica* sp. n. Peru p. 310,  
PROUT Ann. Mag. N. H. (9) 11.

*Scotisia rhamnata* ab. n. *terror*  
Bosnia & Herzegovina, p. 367, SCHAWERDA Verh. zool.-bot. Ges. Wien 64 1914.

*Selidosema ericetaria* ab. n. *depuncta*  
Austria p. (163), NITSCHE Verh. zool.-bot. Ges. Wien 64 1914.—*S. ampla* sp. n.  
New Zealand p. 129, HUDSON Ent. Mo. Mag. 59.

*Semiothisa alternaria* ab. n. *demaculata*  
Digne p. 108, HEINRICH Beiheft D. ent. Zs. 1923.—*S. regressa* nom. n. for  
*S. regula* Dogn. p. 10, DOGNIN Hét. nouv. 24.

*Siona decussata* ab. n. *praeclara*  
Adriatic coast p. 164 (fig.), STAUDER  
Boll. Soc. Adriat. 27 1912.

*Somatina eublemmaria* sp. n. Brazil  
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*Tephrina vincularia* var. n. *mראשנaria* Morocco p. 249 (fig.), OBERTHÜR Études Lép. 20.

*Tephritis inanis* sp. n. French Guiana p. 17, DOGNIN Hét. nouv. 20 1922.

*Tephroclystia schulzi* sp. n. Teneriffa p. (152) (fig.), REBEL Verh. zool.-bot. Ges. Wien 64 1914.—*T. muriflua* sp. n. California p. 22, DYAR Insec. Insc. Mens. 11.

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N. America, SWETT Lepidopterist Salem 2 1918.

*Xenoclystia unipuncta* Warr. see  
*Desmoclystia*.

*Zamacra flabellaria* var. n. *marmaria*  
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#### CERATOCAMPIDAE.

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French Guiana spp. n., BOUVIER Bull.  
Mus. Hist. nat. Paris 1923.

*Dryocampa*, notes on Argentine, pp.  
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*Eacles imperialis* var. n. *approximans* Venezuela p. 353, BOUVIER Bull. Mus. Hist. nat. Paris 1923.

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*Antherea francki, chengtuana* spp. n. W. China p. 171, WATSON Entomologist 56.—*A. brunnea* sp. n. Sumatra p. 99 fig., VAN ECKE Zool. Med. 6 1921.

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*Dirphia geneforti* sp. n. p. 426 Trop. America, BOUVIER Bull. Mus. Hist. nat. Paris 1923.

*Drepanoptera semialba* sp. n. Kamerun p. (211) (fig.), REBEL Verh. zool.-bot. Ges. Wien 65 1915.

*Epiphora sudanica* sp. n. Sudan p. 51 (fig.), LE CERF Bull. Mus. Hist. nat. Paris 1923.

*Gynanisa jama* sp. n. Lake Nyasa p. (211) (fig.), REBEL Verh. zool.-bot. Ges. Wien 65 1915.

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*Orniscodes fassli* sp. n. Bolivia p. 13, DOGNIN Hét. nouv. 22.—*O. gregatus* sp. n. Venezuela p. 1085, BOUVIER C.R. Acad. Sci. 177.

*Perisomena caecigena* ab. n. *derosata* Bosnia & Herzegovina, p. 358, SCHÄFERDA Verh. zool.-bot. Ges. Wien 64 1914.—*P. caecigena* f. n. *feminilis, designate* p. 325 Dalmatia, STAUDER Zs. wiss. Insektenbiol. 18.

*Polythysana edmondsi*, biology pp. 426–432 (fig.) Chile, IZQUIERDO S. Rev. chil. Hist. nat. 25.

*Saturnia (Graellsia) isabellae* f. n. *galliaeploria* figs., OBERTHÜR, CLEU & POWELL Études Lép. 20 p. 161, 21 (pt. 2) p. 77.—S. new hybrids *julii* p. (57), *macrotaos* p. (60), *witzenmanni* p. (63), *pyri* abb. n. *latifascia, kollerii* p. (67), *attingen* p. (68), *macropis* Austria, *atlantica* abb. n. *conjuncta, conjuncta-perrupta* p. (69) Algeria, *spini* abb. n. *conjuncta, infumata* p. (70), *dilutibasis, albescens* p. (71), *pavonia* ab. n. *alboplaga* p. (71), Austria-Hungary, GSCHWANDNER & REBEL Verh. zool.-bot. Ges. Wien 69 1919.

#### LEMONIIDAE.

*Lemonia taraxaci* ab. n. *antigone* Adriatic coast p. 159, STAUDER Boll. Soc. Adriat. 27 1912.—*L. dumi*, notes on colour, ab. n. *sauberi* p. 9 Lower Elbe, WARNECKE Intern. ent. Zs. 17.

#### BOMBYCIDAE.

*Apatelodes dianita* p. 3, *pithala* p. 4 spp. n. Bolivia, DOGNIN Hét. nouv. 19 1920.—*A. sericea* Schaus (= *erecta* Dogn.) p. 25, ID. op. cit. 22.

*Bombyx mori*, egg structure p. 17, GRANDORI Boll. Soc. zool. ital. (4) 1 1920.—*B. mori*, larval development pp. 59–136, JUCCI Boll. Lab. Zool. gen. agrar. Portici 16, and GRANDI op. cit. pp. 3–40 17.—*B. mori*, food of larvae pp. 302–313, VECCHI op. cit. 16.

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## PSYCHIDAE.

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*Apteronota stauderi* sp. n. Innsbruck p. 25 (fig.), WEHRLI Soc. ent. 38.

*Fumea syriaca* sp. n. Syria, p. (137), REBEL Verh. zool.-bot. Ges. Wien 67 1917.

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*Psyche watsoni* sp. n. (fig.) Haiti p. 101, JONES Ent. News 34.

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*Thyridopteryx vernalis* sp. n. (fig.), p. 100 U.S.A., JONES Ent. News 34.

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*Culama caliginosa* larval habits, p. 108, CRISPO Austr. Nat. 5 1923.

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*Dendrolimus pini* varr. n. *ecksteini, wolffi, strandi* p. 55, KRAUSSE Arch. Natg. 83 A 6 1919.

*Epicnaptera tremulifolia* new seasonal form, *püngeleri* ab. n. *rubicunda* Bosnia & Herzegovina, p. 357, SCHAWERDA Verh. zool.-bot. Ges. Wien 64 1914.

*Eriogaster arbusculae*, biology morphology pp. 72-95 (fig.), STANDFUSS Mitt. Ent. Zürich 1 1915.

*Euglyphis niveipunctata* Amazonas p. 31, *rectidivisa* Peru p. 32 spp. n., DOGNIN Hét. nouv. 23.—*E. brumosa* subsp. n. *tripunctata* p. 14, *sylpha, oroyana* p. 15 spp. n. S. America, Id. op. cit. 24.

*Hydrias albiochrea* sp. n. Trinidad p. 995 (fig.), KAYE Proc. Zool. Soc. 1922.

*Lasiocampa quercus* var. *alpina* ab. n. *caecopuncta* Switzerland p. (177), REBEL Verh. zool. bot. Ges. Wien 64 1914.—*L. trifolii* f. n. *daddi* Digne p. 71, HEINRICH Beiheft D. ent. Zs. 1923.—*L. trifolii* var. *medicaginis* f. n. *devittata* Appennines, p. 45, TURATI Atti Soc. Ital. Sci. nat. 62.

*Macrothylacia rubi*, biology, p. 13, WOHNIG Intern. ent. Zs. 17.—*M. rubi*, forcing larvae of, pp. 28, 226, LITTLEWOOD Entomologist 56.

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*Taragama meloni* sp. n. Madagascar p. 147 (fig.), OBERTHÜR Études Lép. 21 pt. 2.

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Wien 65 1915.—*C. laura* Druce, a  
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LATHY Ann. Mag. N. H. (9) 12.

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*Anthrocera filipendulae* ab. n. *bimacula*  
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*Zygaena*, notes on, GROSVENOR Proc.  
S. London Ent. & N. H. Soc. 1922–23  
pp. 64–72.—*Z. filipendulae* ab. (? var.) n.  
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Ges. Wien 66 1916.—*Z. stoechadis* f. n.  
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Verh. zool.-bot. Ges. Wien 70 1920.—  
*Z. achilleae* ff. n. *ligistica*, *nigrocincta*  
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ligust. Sc. nat. geogr. 32 1921.—  
*Z. rhadamanthus* ab. n. *confluens* Digne  
p. 120, HEINRICH Beiheft D. ent. Zs.  
1923.—*Z. meliloti* ab. n. *funerea* Switzerland  
p. 213, CORNELSEN Internat. ent.  
Zs. 16.—*Z. gallica* f. n. *interrupta* (fig.)  
Alpes Maritimes p. 67, BOURSIN Bull.  
Soc. ent. Fr. 1923.—*Z. transalpina* var.  
*altitudinaria* f. n. *cingulata*, *achilleae*  
var. *viciae* f. n. *cingulata*, Appennines,  
p. 44, TURATI Atti Soc. Ital. Sci. nat.  
62.—*Z. transalpina* ff. n. *azurea*, *viri-*  
*descens*, *chrysomelas* Alps p. 21, STAUDER  
Ent. Anz. 3.—*Z. transalpina* ab. n.

*parulae* Trieste p. 103, NAUFOCK Boll. Soc. Adriat. 27 1 1913.—*Z. ungemachi* Morocco p. 200, *johannae* Atlas Mts. p. 224 spp. n., LE CERF Bull. Soc. ent. Fr. 1923.

## THYRIDIDAE.

*Kanshizeia* gen. n. *camadenalis* sp. n. Formosa p. 188, STRAND Arch. Natg. 84 A 12 1920.

*Striglina* (= *Trophoessa* Turner) *citrodes* sp. n. Queensland, *myrtaea* and *myrsalis* synonymy p. 41, *locealis*, *scitaria* synonymy p. 42, TURNER Proc. R. Soc. Vict. 35 1922.

*Suisharyona* gen. n. p. 187, *aperta* sp. n. Formosa p. 188, STRAND Arch. Natg. 84 A 12 1920.

*Trophoessa* Turner see *Striglina*.

## PYRALIDAE.

Crambinae of Florida pp. 49–55, AINSLIE Florida Ent. 6.

Revision of Australian Anerastianae, p. 451, TURNER Proc. Linn. Soc. N.S.W. 48.

*Agathodes syleptalis* sp. n. Ecuador p. 147, STRAND Arch. Natg. 85 A 12 1920.

*Agriope rabatalis* sp. n. (fig.) Morocco p. 306, DE JOANNIS Bull. Soc. ent. Fr. 1922.

*Ammatucha* gen. n. (near *Ceroprepes*) p. 43, *lathria* sp. n. Queensland p. 44, TURNER Proc. R. Soc. Vict. 35 1922.

*Ancylolomia syriaca* subsp. n. *mesopotamica*, Mesopotamia, p. (161), REBEL Verh. zool.-bot. Ges. Wien 68 1918.—*A. nigrilinea* sp. n. (fig.) Morocco p. 305, DE JOANNIS Bull. Soc. ent. Fr. 1922.—*A. urruna* sp. n. E. Africa p. 117, STRAND Arch. Natg. 85 A 12 1920.

*Anerastia microrrhoda* p. 453, *marcida* p. 455, *macrorrhynca* p. 456, spp. n. Australia, TURNER Proc. Linn. Soc. N.S.W. 48.

*Anomima* gen. n. (near *Simaethistis*) p. 55, *phaeochroa* sp. n. Queensland p. 56, TURNER Proc. R. Soc. Vict. 35 1922.

*Beebea* gen. n. *guglielmi* sp. n. Galapagos Is. p. 46, SCHÄUS Zoologica 5.

*Bostra bipyra* sp. n. Formosa p. 190, STRAND Arch. Natg. 84 A 12 1920.

*Cabotia cundajensis* var. n. *caparonis* Trinidad p. 126, STRAND Arch. Natg. 85 A 12 1920.

*Canarsiana* gen. n. *discocellularis* sp. n. Massachusetts p. 123, ULMER Arch. Natg. 85 A 12 1920.

*Ceroprepes mniaropsis* ♂ described p. 43, TURNER Proc. R. Soc. Vict. 35 1922.

*Chalcidoptera thermographalis* sp. n., *contraria* var. n. *curtipalpis* p. 140 Cameroons, STRAND Arch. Natg. 85 A 12 1920.

*Chilo latmiadelis* n. n. for *C. lativittalis* Dogn. (nec Walk.) p. 38, DOGNIN Hét. nouv. 21.

*Cledeobia moldavica* anatomical details, FEDOROV Bull. Soc. ent. Moscou 2 no. 2 pp. 45–56 (fig.).

*Clupeosoma schausalis*, *brevicans* p. 26, *barnesalis* Guatemala, *protopennis* Mexico p. 27 spp. n., DYAR Insec. Insc. Mens. 11.

*Constantia inclinatalis* sp. n. Tenerife p. (152) (fig.), REBEL Verh. zool.-bot. Ges. Wien 64 1914.

*Cornifrons ulceratalis* abb. n. *benignalis*, *malignalis* (fig.) p. (34), SCHÄFERDA Verh. zool.-bot. Ges. Wien 68 1918.

*Crambus combinellus* ab. n. *atrox* Austria, p. (53), GALVAGNI Verh. zool.-bot. Ges. Wien 70 1920.—*C. pratellus* var. n. *marpurgensis* Germany p. 36, *hortuellus* var. n. *hortibius*, *cultimellus* var. n. *subarcticellus* Norway p. 37, STRAND Arch. Natg. 85 A 4 1920.—*C. intermedius* sp. n. p. 334, *cassentinellus* f. n. *distinctus* p. 335 Switzerland (fig.), MÜLLER-RUTZ Mitt. Ent. Zürich 5 1920.—*C. agricolellus*, *diegonellus* spp. n. California p. 28, DYAR Insec. Insc. Mens. 11.—*C. luridus* sp. n. New Zealand p. 64, HUDSON Ent. Mo. Mag. 59.—*C. edmontellus* sp. n. Alberta p. 164, McDUNNOUGH Canad. Ent. 55.—*C. ammoploceus* sp. n. Queensland p. 45, TURNER Proc. R. Soc. Vict. 35 1922.

*Critonia* (*Singhaliella* subgen. n.) *simplicipalpis* sp. n. Formosa p. 189, STRAND Arch. Natg. 84 A 12 1920.

*Desmia maripica* sp. n. Bolivia p. 137,  
STRAND Arch. Natg. 85 A 12 1920.

*Dichocrocid evaxalis* var. n. *biagialis*  
New Guinea p. 145, STRAND Arch.  
Natg. 85 A 12 1920.

*Dipleurina resinea* f. n. *pernigralis*,  
Appennines, p. 64 (fig.), TURATI Atti  
Soc. ital. Sci. nat. 62.

*Diptychophora planetopa*, sp. n. N.  
Zealand p. 162, MEYRICK Trans. N. Z.  
Inst. 54.

*Eclipsiodes semigilva* sp. n. Victoria  
p. 51, TURNER Proc. R. Soc. Vict. 35  
1922.

*Elasmopalpus?* *galdinella* sp. n.  
Galapagos Is. p. 46, SCHAUS Zoologica  
5.

*Erilusa rosalina* sp. n. Peru p. 148,  
STRAND Arch. Natg. 85 A 12 1920.

*Ethnistis munitalis* var. n. *caparonis*  
Trinidad p. 127, STRAND Arch. Natg.  
85 A 12 1920.

*Eurrhyparodes bracteolalis* var. n.  
*mambarelis* New Guinea p. 136, STRAND  
Arch. Natg. 85 A 12 1920.

*Euthesaura* gen. n. (near *Tineodes*),  
*glycinia* (genotype) p. 57, *carbonaria*  
p. 58 spp. n. Queensland, TURNER Proc.  
R. Soc. Vict. 35 1922.

*Euthrausta* gen. n. type (*Tineodes*)  
*oxyprora* Turn. p. 59, TURNER Proc. R.  
Soc. Vict. 35 1922.

*Euzophera postflavida* sp. n. French  
Guiana p. 29, DYAR Insec. Insc. Mens.  
11.

*Filodes obscuralis* sp. n. Cameroons  
p. 142, STRAND Arch. Natg. 85 A 12  
1920.

*Framinghamia* gen. n. *botys* sp. n.  
Massachusetts p. 160, STRAND Arch.  
Natg. 85 A 12 1920.

*Fundella agapella* sp. n. Galapagos Is.  
p. 47, SCHAUS Zoologica 5.

*Glyphodes cachinalis* Costa Rica p.  
151, *bitjealis* Cameroons p. 152 spp. n.,  
*westermanni* var. n. *moresbyensis* New  
Guinea p. 154, STRAND Arch. Natg. 85  
A 12 1920.

*Gvelilia* gen. n. *parallela* sp. n.  
E. Africa p. 129, STRAND Arch. Natg.  
85 A 12 1920.

*Hydrocampus nymphaeata*, respiration  
of larva and pupa pp. 29-42 (fig.),  
EGE Videns. Medd. 76.

*Lamoria idiolepidata*, *periolita* spp. n.  
Queensland p. 44, TURNER Proc. R. Soc.  
Vict. 35 1922.

*Lamprosema victoriae* Texas p. 25,  
*subbasalis* California p. 26, spp. n.,  
*victoriae* subsp. n. *sinaloanensis* Mexico  
p. 25, DYAR Insec. Insc. Mens. 11.

*Larodryas* gen. n. near *Oenogenes*,  
*haplocala* sp. n. Queensland p. 49,  
TURNER Proc. R. Soc. Vict. 35 1922.

*Margaronia apiospila* sp. n. Queens-  
land p. 50, TURNER Proc. R. Soc. Vict.  
35 1922.

*Megasis indianella* sp. n. California  
p. 28, DYAR Insec. Insc. Mens. 11.

*Musotima callidryas* sp. n. Queensland  
p. 49, TURNER Proc. R. Soc. Vict. 35  
1922.

*Nephopteryx trinitatis* sp. n. Trinidad  
p. 120, STRAND Arch. Natg. 85 A 12  
1920.

*Nicetiodes* gen. n. *apaniella* sp. n.  
Galapagos Is., p. 48, SCHAUS Zoologica  
5.

*Notocrambus* gen. n. p. 45, *holomelas*  
sp. n. Tasmania p. 46, TURNER Proc.  
R. Soc. Vict. 35 1922.

*Olyca creabates* sp. n. California p. 29,  
DYAR Insec. Insc. Mens. 11.

*Pempelia dilutella* f. n. *extincta* Grono  
p. 335, MÜLLER-RUTZ Mitt. Ent. Zürich  
5 1920.

*Phlyctaenodes nudalis* ab. n. *kronei*  
Bosnia & Herzegovina, p. 375, SCHA-  
WERDA Verh. zool.-bot. Ges. Wien 64  
1914.—*P. nudalis* ab. n. *serenalis*  
Herzegovina, p. 249, Id. op. cit. 66 1916.

*Phostria duplicata* sp. n. Trinidad  
p. 997 (fig.), KAYE Proc. Zool. Soc.  
1922.

*Piesmopoda carpasella* sp. n. Gal-  
pagos Is. p. 47, SCHAUS Zoologica 5.

*Piletocera formosalis*, *batjianalis* spp.  
n. p. 134, STRAND Arch. Natg. 85 A 12  
1920.

*Pilocrocis leucoplagalalis* var. n. *cachiana*  
Costa Rica p. 138, STRAND Arch. Natg.  
85 A 12 1920.—*P. chathamalis* sp. n.  
Galapagos Is. p. 45, SCHAUS Zoologica  
5.

*Pionea decrepitalis* ab. n. *leucoalis* Norway p. 40, STRAND Arch. Natg. 85 A 4 1920.—*P. crocealis* gen. aest. *minoralis* f. n. Switzerland p. 337, MÜLLER-RUTZ Mitt. Ent. Zürich 5 1920.—*P. ferrugalis* abb. n. *obsoleta*, *maculata* Italy p. 105, COSTANTINI N. Beiträge system. Insektenk. 2.

*Pococera brunnapepx* sp. n. Trinidad p. 996 (fig.), KAYE Proc. Zool. Soc. 1922.

*Pseudoligostigma* gen. n. *incisa* sp. n. Trinidad p. 132, STRAND Arch. Natg. 85 A 12 1920.

*Pycnarmon pseudohesusalis* Nyasa p. 135, *lederaralis* Sierra-Leone p. 136 spp. n., STRAND Arch. Natg. 85 A 12 1920.

*Pygospila tyres* var. n. *tyridia* Cameroons p. 155, STRAND Arch. Natg. 85 A 12 1920.

*Pyrausta eos* ab. n. *bitjensis* Cameroons p. 159, STRAND Arch. Natg. 85 A 12 1920.—*P. cespitalis* ab. n. *hafneri* (fig.) Austria, p. (27), REBEL Verh. zool.-bot. Ges. Wien 66 1916.—*P. nubilalis* f. n. *fanalis*, *cingulata* f. n. *apenninalis* Italy p. 105, COSTANTINI N. Beiträge system. Insektenk. 2.—*P. eaneanalis* sp. n. Galapagos Is. p. 45, SCHAUS Zoologica 5.

*Rhinaphena* gen. n. *discocellularis* sp. n. Argentina p. 118, STRAND Arch. Natg. 85 A 12 1920.

*Saccopleura excissimalis* sp. n. Mexico p. 27, DYAR Insec. Insc. Mens. 11.

*Salebria palumbella* f. n. *ragonoti* Italy p. 120, TURATI Boll. Soc. ent. Ital. 55.

*Saluria adenocera* sp. n. Australia p. 458, TURNER Proc. Linn. Soc. N.S.W. 48.

*Samea delicata* sp. n. Trinidad p. 996 (fig.), KAYE Proc. Zool. Soc. 1922.

*Schoenobius melanostigmus*, *crossostichus* spp. n. Queensland p. 47, TURNER Proc. R. Soc. Vict. 35 1922.—*S. (Siga) incertellus*, synonymy discussed, FLETCHER Mem. Dept. Agric. India 7 pp. 276–278.

*Scoparia dubitalis* ab. n. *inspersella*, Austria p. (64), GALVAGNI Verh. zool.-

bot. Ges. Wien 70 1920.—*S. murana* var. n. *ranica* Norway p. 38, STRAND Arch. Natg. 85 A 4 1920.—*S. dubitalis* f. n. *australis*, *manifestella* f. n. *ticinensis* Switzerland p. 336, MÜLLER-RUTZ Mitt. Ent. Zürich 5 1920.—*S. ischnoptera* p. 52 Victoria, *ithyntis* N. S. Wales, *melanoxantha* p. 52, *gethosyna* Queensland, *crocospila* Victoria, *axiolecta* Tasmania p. 53, *tristicta* p. 54 N. S. Wales spp. n., TURNER Proc. R. Soc. Vict. 35 1922.—*S. ambigualis* f. n. *bifascialis*, Appennines, p. 63 (fig.), TURATI Atti Soc. Ital. Sci. nat. 62.—*S. triangulalis* sp. n. New Zealand p. 64, HUDSON Ent. Mo. Mag. 59.—*S. zophochlaena*, sp. n. N. Zealand p. 162, MEYRICK Trans. N. Z. Inst. 54.

*Singhaliella* subgen. n. see *Critonia*.

*Styphlolepis peribarys*, *hypermegas* spp. n. Queensland p. 48, TURNER Proc. R. Soc. Vict. 35 1922.

*Sylepta phaeopleura* sp. n. Queensland p. 50, TURNER Proc. R. Soc. Vict. 35 1922.—*S. pseudoderogata* p. 148, *bitjocola* p. 149 spp. n. Cameroons, STRAND Arch. Natg. 85 A 12 1920.

*Syngamityta* gen. n. p. 155, *leucinodalis* sp. n. Trinidad p. 156, STRAND Arch. Natg. 85 A 12 1920.

*Tanycnema* gen. n. (near *Palaeodes*) p. 56, *anomala* sp. n. Queensland p. 57, TURNER Proc. R. Soc. Vict. 35 1922.

*Tauroscopa notabilis* sp. n. N. Zealand p. 149, PHILPOTT Trans. N. Z. Inst. 54.

*Tegostoma stangei* sp. n. (fig.) Transcasplia and N. Afghanistan, p. (148), ZERNY Verh. zool.-bot. Ges. Wien 66 1916.

*Titanio phrygialis* f. n. *apruitialis* Italy p. 105, COSTANTINI N. Beiträge system. Insektenk. 2.

*Ubida amochla* sp. n. Queensland p. 46, TURNER Proc. R. Soc. Vict. 35 1922.

*Ulopeza alienalis* ab. n. *fulvimaculalis* Kamerun p. 141, STRAND Arch. Natg. 85 A 12 1920.

*Willesia pallida* f. n. *denigrata* Italy p. 105, COSTANTINI N. Beiträge system. Insektenk. 2.

## PTEROPHORIDAE.

*Alucita phaeoschista* sp. n. Cyprus p. 277, MEYRICK Entomologist 56.

*Oidaematophorus lindseyi* sp. n. Manitoba p. 87, McDUNNOUGH Canad. Ent. 55.

*Platyptilia pulverulenta* p. 149, *ferruginea* p. 150, spp. n., N. Zealand, PHILPOTT Trans. N. Z. Inst. 54.

*Pterophorus evansi* sp. n. Ontario p. 85, McDUNNOUGH Canad. Ent. 55.

*Stenoptilia bowmani* sp. n. Alberta p. 86, McDUNNOUGH Canad. Ent. 55.

## TORTRICIDAE.

The genitalia of the Tortricidae, PIERCE & METCALFE Liverpool 1922 pp. 1-101 34 pls.

Keys to subfamilies and genera of Olethreutidae, HEINRICH U. S. Nat. Mus. Bull. 123 298 pp. 59 pls. 2 diagrs.

*Acroclita prasinissa, clarissa* p. 152, *madeus* p. 153 spp. n. Java, MEYRICK Zool. Med. Leiden 6 1921.

*Ancylis*, key to N. American p. 243, *carbonana* sp. n. (fig.) Pennsylvania p. 248, HEINRICH U. S. Nat. Mus. Bull. 123.—*A. rhenana* sp. n. Switzerland p. 340 (fig.), MÜLLER-RUTZ Mitt. Ent. Zürich 5 1920.—*A. comptanoides* sp. n. Norway p. 57, STRAND Arch. Natg. 85 A 4 1920.

*Anchylopera*, key to N. American p. 233, *burgessiana* var. n. *pruni* New Jersey p. 239, *definitivana* sp. n. Nevada (fig.) p. 270, HEINRICH U. S. Nat. Mus. Bull. 123.

*Anisotaenia rectifasciana* f. n. *insubrica* Switzerland p. 339, MÜLLER-RUTZ Mitt. Ent. Zürich 5 1920.

*Argyroploce rivulana* abb. n. *conjugata*, *erecta*, *cespitanoides* p. 45 and *hemnesina* p. 46, *lacunana* ab. n. *lucivaganooides* p. 48, *schulziana* ff. n. *regularis* and *interrupta*, *raveniana* sp. n. p. 49 Norway, *cespitanica* ab. n. *marpurgana* Germany p. 51, STRAND Arch. Natg. 85 A 4 1920.—*A. dextrana*, *bowmanana* spp. n. Canada p. 165, McDUNNOUGH Canad. Ent. 55.—*A. phaeopelta* p. 155, *xanthogastra*, *scansilis* p. 156, *anisoptera*, *catharostoma* p. 157, *philocompsa* p. 158 spp. n. Java, MEYRICK Zool. Med. Leiden 6 1921.

*Argyrotoxa septifera* p. 149, *dumigera* p. 150 spp. n. Java, MEYRICK Zool. Med. Leiden 6 1921.

*Bactra anpingiana* sp. n. Formosa p. 192, STRAND Arch. Natg. 84 A 12 1920.—*B. maiorina* Virginia, *priapeia* Louisiana spp. n. p. 105, HEINRICH Proc. Ent. Soc. Wash. 25.

*Barbara* gen. n. for *Evetria colfaxiana* Kearfott, key to species p. 27, HEINRICH U. S. Nat. Mus. Bull. 123.

*Cacoecia seditionosa, tabescens* p. 147 Java, *spilotoma* p. 148 Celebes spp. n., MEYRICK Zool. Med. Leiden 6 1921.—*C. eleagnana* p. 166, *myricana*, *columbiana* p. 167, spp. n. Canada, McDUNNOUGH Canad. Ent. 55.

*Capua vulgaris* p. 145, *pigra* Java, *cirrhanthes* Celebes p. 146 spp. n., MEYRICK Zool. Med. Leiden 6 1921.

*Carpocapsa erotella* sp. n. Maryland, p. 121, HEINRICH Proc. Ent. Soc. Wash. 25.

*Catamacta* (?) *punctiseriata* sp. n. Formosa p. 191, STRAND Arch. Natg. 84 A 12 1920.

*Cnephasia incertana* ab. n. *leucotaeiana* Bosnia & Herzegovina, p. 376, SCHAWERDA Verh. zool.-bot. Ges. Wien 64 1914.

*Conchylis ambiguella* biology, Romania p. 53 (figs.), LEON An. Acad. Române 35.—*C. conjunctana*, biology and distribution, p. 7, PETRY D. ent. Zs. Iris 37.

*Diactenis haplozona* sp. n. Java p. 149, MEYRICK Zool. Med. Leiden 6 1921.

*Dichelia miserabilis* sp. n. Formosa p. 193, STRAND Arch. Natg. 84 A 12 1920.

*Ecclitica* gen. n., type *hemiclista* Meyr., *incendiaria* sp. n. N. Zealand p. 164, MEYRICK Trans. N. Z. Inst. 54.

*Endothenia infuscata* sp. n. Maryland p. 109, HEINRICH Proc. Ent. Soc. Wash. 25.

*Epiblema latericiana* sp. n. Croatia, etc., p. (126), REBEL Verh. zool.-bot. Ges. Wien 69 1919.—E., key to North American p. 137, *grossbecki* Florida p. 142, *prae*sumptiosa** Texas p. 143, spp. n., *prae*sumptiosa** var. n. *separationis* Texas p. 143, *deflexana* Texas

p. 144, *insidiosa* Carolina p. 145, *exacerbatica* Carolina p. 146, *purpurissatana* Br. Columbia p. 149, *infelix* Carolina p. 151, *gratuitana* Washington p. 268, *periculosa* Br. Columbia p. 268, spp. n. (figs.), HEINRICH U. S. Nat. Mus. Bull. 123.

*Epicorista emphanes*, Meyr. (= *theatralis* Philp.), p. 150, PHILPOTT Trans. N. Z. Inst. 54.

*Epinotia ericotana* abb. n. *vetusta* p. 52, *conuncta*, *devittana* p. 53 Norway, STRAND Arch. Natg. 85 A 4 1920.—*E.*, key to N. American p. 196, *ethnica* sp. n. California p. 201, *pulsatillana* var. n. *siskiyouensis* p. 202, *hopkinsana* var. n. *cupressi* p. 207, *fumoviridana* California p. 208, *silvertoniensis* Colorado p. 214, *digitana* Br. Columbia p. 215, *ruidosana* New Mexico p. 216, *heucherana* Virginia p. 217, *bigemina* California p. 220, *bicordana* Manitoba p. 220, *unica* Tennessee p. 221, *marmoreana* Utah p. 222, *meritana* Utah p. 226, spp. n., *cruciana* var. n. *alaskae* Alaska p. 229, *vagana* Washington p. 230, *signiferana* p. 232, *improvisana* California p. 269, spp. n. (figs.), HEINRICH U. S. Nat. Mus. Bull. 123.—*E. dietzana* see *Norma* gen. n.

*Episimus tyrius* sp. n. N. York p. 107  
HEINRICH Proc. Ent. Soc. Wash. 25.

*Eucosma*, key to N. American p. 72, *magnidicana* sp. n. Colorado p. 83, *circulana* var. n. *gemellana* Florida p. 96, *fratruelis* p. 98, *fraudabilis* N. Carolina p. 98, *consociana* Utah p. 101, *exclusoriana* Texas p. 110, *daemonicana* New Mexico p. 111, *tahoensis* California p. 112, *exceptionana* Nevada p. 117, *bactrana* Colorado p. 117, *excusabilis* California p. 123, *mobilensis* Alabama p. 125, *consobrinana* S. Dakota p. 128, *suadana* p. 130, *exploitana* Utah p. 132, *metariana* California p. 133, *conspicendana* Utah p. 135, *serapicana* Montana p. 266, *palabundana* Manitoba p. 267, spp. n. (figs.), HEINRICH U. S. Nat. Mus. Bull. 123.—*E. plebeiana* Zell., redescribed, p. 151, PHILPOTT Trans. N. Z. Inst. 54.—*E. familiaris* p. 153, *referenda*, *deltiplaca* p. 154 spp. n. Java, MEYRICK Zool. Med. Leiden 6 1921.

*Euxanthis drenowskyi* sp. n. Bulgaria p. 7 (42), REBEL Verh. zool.-bot. Ges. Wien 66 1916.

*Exartema subnubilum*, *electrofuscum* p. 110, *connatum* p. 112 New Jersey, *mediopartum* Virginia, *tilianum* New Jersey p. 113, *sciotanum*, *nigranum* p. 115, *ochrosuffusanum* p. 117 Ohio, *brunneopurpuratum* p. 118 Virginia, *melanomesum* Maine, *quebecense* p. 119 Quebec, spp. n., HEINRICH Proc. Ent. Soc. Wash. 25.

*Exentera*, key to N. American p. 173, *habrosana* sp. n. California p. 178 (fig.), HEINRICH U. S. Nat. Mus. Bull. 123.

*Gelophaula* gen. n., type *trisulca* Meyr., p. 163, MEYRICK Trans. N. Z. Inst. 54.

*Grapholitha cosmophorana* ab. n. *hinnebergiana* Norway p. 56, STRAND Arch. Natg. 85 A 4 1920.

*Gretchenia* gen. n. for *Hedya deludana* Clemens (fig.) p. 179, key to N. American p. 180, *concupitana* Florida p. 181, *dulciana* New Jersey p. 182, *amatana* p. 184, *delicatana* Pennsylvania p. 185, spp. n. (fig.), HEINRICH U. S. Nat. Mus. Bull. 123.

*Griselda* gen. n. for *Paedisca radicana* Wlsm., key to N. American p. 186, *gerulae* sp. n. (fig.) Pennsylvania p. 187, HEINRICH U. S. Nat. Mus. Bull. 123.

*Gwendolina* gen. n. p. 188, *concitatrix* sp. n. Texas p. 189 (fig.), HEINRICH U. S. Nat. Mus. Bull. 123.

*Gypsonoma*, key to N. American p. 162, *substitutionis* p. 163, sp. n. Manitoba (fig.), HEINRICH U. S. Nat. Mus. Bull. 123.

*Halonota lautana* see *Sereda*.

*Homona picrostacta* sp. n. Java p. 146, MEYRICK Zool. Med. Leiden 6 1921.—*H. negundana* sp. n. Manitoba p. 166, McDUNNOUGH Canad. Ent. 55.

*Hystricophora*, key to N. American p. 254, *paradisiae* Washington sp. n. p. 255, *stygiana* var. n. *californiae* California p. 256, *aspodelana* var. n. *seraphicana* Washington p. 258, *osten-tatrix* sp. n. California p. 270, HEINRICH U. S. Nat. Mus. Bull. 123.

*Kundrya* gen. n. *finitimana* sp. n. (fig.) New Hampshire p. 192, HEINRICH U. S. Nat. Mus. Bull. 123.

*Laspeyresia obnixa, euthenopa* p. 159,  
*parichnota* p. 160 *spp. n.* Java, MEYRICK  
 Zool. Med. Leiden 6 1921.—*L. nigri-*  
*cana* Steph. (= *novimundi* Heinr.)  
 p. 13, HEINRICH Canad. Ent. 55.

*Lobesia proterandra* sp. n. Java p. 155,  
 MEYRICK Zool. Med. Leiden 6 1921.

*Lozopera ferulae* sp. n. France p. 337  
 (fig.), MÜLLER-RUTZ Mitt. Ent. Zürich  
 5 1920.

*Norma* gen. n. (fig.) for *Epinotia*  
*dietziana* Kearfott p. 191, HEINRICH  
 U. S. Nat. Mus. Bull. 123.

*Olethreutes achatana* ab. n. *unicolo-*  
*rana* (fig.) Austria p. (55), GALVAGNI  
 Verh. zool.-bot. Ges. Wien 70 1920.

*Paedisca constrictana* see *Sonia* gen. n.

*Pammene engadinensis* sp. n. Switzer-  
 land p. 340 (fig.), MÜLLER-RUTZ Mitt.  
 Ent. Zürich 5 1920.—*P. rescissa* sp. n.  
 Java p. 159, MEYRICK Zool. Med. Leiden  
 6 1921.—*P. felicitana*, sp. n. Quebec  
 p. 120, HEINRICH Proc. Ent. Soc. Wash.  
 25.

*Peronea hastiana* distribution p. 76,  
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*albana*, *albimaculana* p. 103, *rufimacu-*  
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*subhastiana*, *subfusciana* p. 150, *rufi-*  
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*diana*, *flavocostana* p. 250, *trivittana*  
 p. 251, *nigrodivisana* p. 252, *subdivisana*  
 p. 269, figs., SHELDON Entomologist 56.—*P. aphorista* sp. n. Cyprus p. 278,  
 MEYRICK Entomologist 56.

*Petrova* gen. n. for *Retinia* *com-*  
*stockiana* Fernald p. 21, key to species  
 p. 22, HEINRICH U. S. Nat. Mus. Bull.  
 123.

*Philocryptica* gen. n., type *polypodii*  
 Watt, p. 164, MEYRICK Trans. N. Z.  
 Inst. 54.

*Polychrosis spiraeifoliana* sp. n.  
 Pennsylvania, p. 106, HEINRICH Proc.  
 Ent. Soc. Wash. 25.

*Proteoteras*, key to N. American p.  
 165, *obnigrana* p. 169 sp. n. New Hamp-  
 shire (fig.), HEINRICH U. S. Nat. Mus.  
 Bull. 123.

*Protopterna citrophanes* sp. n. Java  
 p. 150, MEYRICK Zool. Med. Leiden 6  
 1921.

*Retinia comstockiana* see *Petrova*.

*Rhyacionia*, key to N. American p. 14,  
*busckana* p. 17, *adana* p. 18, *spp. n.*  
 (figs.), HEINRICH U. S. Nat. Mus. Bull.  
 123.

*Semasia helianthana* see *Suleima*.

*Sereda* gen. n. for *Halonota lautana*  
 Clemens, p. 121, HEINRICH Proc. Ent.  
 Soc. Wash. 25.

*Sonia* gen. n. (fig.) for *Paedisca*  
*constrictana* Zeller, key to North  
 American p. 160, HEINRICH U. S. Nat.  
 Mus. Bull. 123.

*Spatalistis translineata* sp. n. Java  
 p. 151, MEYRICK Zool. Med. Leiden 6  
 1921.

*Spilonota chlorotripta* sp. n. Java  
 p. 151, MEYRICK Zool. Med. Leiden 6  
 1921.

*Suleima* gen. n. for *Semasia helian-*  
*thana* Riley p. 155, key to N. American  
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*cinerodorsana* Pennsylvania p. 159,  
*spp. n.* (fig.), HEINRICH U. S. Nat. Mus.  
 Bull. 123.

*Thiodia* key to N. American p. 33,  
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*spp. n.* (figs.), HEINRICH U. S. Nat. Mus.  
 Bull. 123.

*Tortrix conwayana* ab. n. *erebina*, Bosnia & Herzegovina, p. 250, SCHAWERDA Verh. zool.-bot. Ges. Wien 66 1916.—*T. burgasiensis* sp. n. Bulgaria p. (42), REBEL Verh. zool.-bot. Ges. Wien 66 1916.—*T. osseana* f. n. *pallida* Ferré p. 338 (fig.), MÜLLER-RUTZ Mitt. Ent. Zürich 5 1920.—*T. forsterana* var. n. *nordlandiae* Norway p. 43, STRAND Arch. Natg. 85 A 4 1920.—*T. alberta* p. 167, *trentonana*, *flavidana* p. 168 spp. n. Canada, McDUNNOUGH Canad. Ent. 55.—*T. forsterana* f. n. *fazi*, *substrigana* sp. n. Italy p. 106, CO-TANTINI N. Beiträge System. Insektenk. 2.—*T. spatiosa* sp. n. N. Zealand, p. 150, PHILPOTT Trans. N. Z. Inst. 54.

*Tritopterna* gen. n. (near *Acrocilia*) p. 151, *chionostoma* sp. n. Java p. 152, MEYRICK Zool. Med. Leiden 6 1921.

*Zeiraphera* key to N. American (fig.) p. 170, HEINRICH U. S. Nat. Mus. Bull. 123.

#### AEGERIIDAE.

Synopsis of Australian genera of Aegeriidae p. 60, TURNER Proc. R. Soc. Vict. 35 1922.

Aegeriidae of Sicily pp. 211–220, RAGUSA Boll. Lab. Zool. gen. agrar. 16.

*Paranthrene zoniota* sp. n. Queensland p. 62, TURNER Proc. R. Soc. Vict. 35 1922.

*Synanthedon cruentata* ab. n. *lugubris* Sicily p. 213, RAGUSA Boll. Lab. Zool. gen. agrar. 16.—*S. martjanovi* sp. n. Siberia p. 289, SHELUZHKO Ann. Soc. ent. Fr. 91.

*Trochilium coracodes* sp. n. Queensland p. 61, TURNER Proc. R. Soc. Vict. 35 1922.

#### TINEIDAE (s.l.)

Key to Australian genera of Tineodidae p. 55, TURNER Proc. R. Soc. Vict. 35 1922.

The Chambers specimens of Tineina in the collection of the American Entomological Society, BRAUN Trans. Amer. Ent. Soc. 49 pp. 347–358.

*Acanthocasis* gen. n. (near *Corsocasis*, Heliodinidae), *flavispinis* sp. n. Java p. 178, MEYRICK Zool. Med. Leiden 6 1921.

(N-12519 j) Q

*Achyrostola* gen. n. (near *Pseudodoxia*, Oecophoridae), *ergastis* sp. n. Java p. 171, MEYRICK Zool. Med. Leiden 6 1921.

*Acria amphorodes* sp. n. Punjab p. 612, MEYRICK Exot. Micr. 2.

*Acribologa* gen. n. (Gelechiidae) (near *Dichomeris*) type *Nothris malacodes* Meyr. p. 622, MEYRICK Exot. Micr. 2.

*Acridotarsa deloneura* sp. n. W. Australia p. 186, TURNER Trans. R. Soc. S. Aust. 47.

*Acrocercops delicata*, *cyphostacta* p. 189, *tripolis*, *lophonota* p. 190 spp. n. Java, MEYRICK Zool. Med. Leiden 6 1921.—*A. pertenuis* sp. n. Queensland p. 171, TURNER Trans. R. Soc. S. Aust. 47.

*Acrolepia similella* sp. n. Switzerland p. 345, *variella* sp. n. no locality p. 346 (fig.), MÜLLER-RUTZ Mitt. Ent. Zürich 5 1920.

*Acrolophus goniocentra*, *chloropelta*, *hypophaea* p. 609, *contubernalis*, *setiacma* p. 610 spp. n. Brazil, MEYRICK Exot. Micr. 2.—*A. corticinicolor* sp. n. Costa Rica p. 165, STRAND Arch. Natg. 85 A 12 1920.

*Actinoscelis astricta* sp. n. Queensland p. 80, TURNER Proc. R. Soc. Vict. 35.

*Aeolanthes cyclantha* S. India, *deltaogramma* Assam spp. n. p. 611, MEYRICK Exot. Micr. 2.

*Aeoloscelis ancistrota*, *thiostola* spp. n. Queensland p. 77, TURNER Proc. R. Soc. Vict. 36.

*Ageliarachis* gen. n. (a derivative of *Dichomeris*, Gelechiidae) p. 622, *rhizogramma* sp. n. Brazil p. 623, MEYRICK Exot. Micr. 2.

*Alabonia superior* sp. n. Balkans, p. (211), REBEL Verh. zool.-bot. Ges. Wien 67 1917.

*Amphithera smaragdopa* sp. n. Java p. 192, MEYRICK Zool. Med. Leiden 6 1921.—*A. hemerina* sp. n. Queensland p. 175, TURNER Trans. R. Soc. S. Aust. 47.

*Anacampsis schillei* sp. n. Galicia p. 177, STRAND Arch. Natg. 83 A 7 1919.—*A. triangularis* sp. n. Lower California p. 118, BRAUN Prec. Cal. Acad. Sci. 12.

*Anaptilora* gen. n. (Gelechiidae),  
*basiphaea*, *haplospila*, spp. n., Australia,  
 p. 149, TURNER Proc. R. Soc. Queensland  
 31 1920.

*Anarsia eutacta* sp. n. Java p. 163,  
 MEYRICK Zool. Med. Leiden 6 1921.

*Anisoplaca viatrix* sp. n. Java p. 165,  
 MEYRICK Zool. Med. Leiden 6 1921.

*Antaeotricha neurographa* sp. n. Brazil  
 p. 614, MEYRICK Exot. Mier. 2.

*Apophthisis congregata* sp. n. California,  
 p. 121, BRAUN Trans. Amer. Ent.  
 Soc. 49.

*Aproopta* gen. n. (Gelechiidae) p. 171,  
*melanchlaena* sp. n. Australia p. 172,  
 TURNER Proc. R. Soc. Queensland 31  
 1920.

*Aprosoesta* gen. n. (Tineidae), *pancalia*  
 sp. n. Australia, p. 151, TURNER Proc.  
 R. Soc. Queensland 31 1920.

*Ardiosteres crossospila* sp. n. Queensland,  
 p. 191, TURNER Trans. R. Soc. S.  
 Aust. 47.

*Argyresthia pygmaecella* f. n. *alpina*  
 Calfeisental p. 345, MÜLLER-RUTZ Mitt.  
 Ent. Zürich 5 1920.—*A. pygmaecella* var.  
 n. *hyperboreella* Norway p. 61, STRAND  
 Arch. Natg. 85 A 4 1920.

*Aristotelia remissella* subsp. n. *rufo-*  
*basella*, Austria, p. (10), REBEL Verh.  
 zool.-bot. Ges. Wien 66 1916.—*A. epicharta*,  
*sticheris*, *thermerastis* p. 113,  
*crypsixantha* p. 114, *ferritincta*, *eury-*  
*psola*, *turbida* p. 115, Australia, spp. n.,  
 TURNER Proc. R. Soc. Queensland 31  
 1920.—*A. pulvera* sp. n. Lower California p. 117, BRAUN Proc. Cal. Acad.  
 Sci. 12.

*Ascalenia subusta* sp. n. Java p. 170,  
 MEYRICK Zool. Med. Leiden 6 1921.

*Asymplecta* gen. n. (near *Opocona*,  
 Lyonetiidae) p. 193, *circumflua* sp. n.  
 Java p. 194, MEYRICK Zool. Med.  
 Leiden 6 1921.

*Attevea hesychima* sp. n. Queensland  
 p. 170, TURNER Trans. R. Soc. S. Aust.  
 47.

*Aulacomima ceramochroa* sp. n.  
 Australia, p. 150, TURNER Proc. R. Soc.  
 Queensland 31 1920.

*Auximobasis normalis*, imported into  
 England, p. 155, MANSBRIDGE Lancs.  
 Chas. Nat. 15.

*Azaleodes* gen. n. (Tineidae) *micro-*  
*nipha* sp. n. Queensland, p. 192,  
 TURNER Trans. R. Soc. S. Aust. 47.

*Bankesia macedoniella*, sp. n., Macedo-  
 nia, p. (142), REBEL Verh. zool.-bot.  
 Ges. Wien 69 1919.—*B. crepusculella*  
 sp. n. Switzerland p. 346 (fig.), MÜLLER-  
 RUTZ Mitt. Ent. Zürich 5 1920.

*Barea chlorozona* p. 54, *lamprota*  
 p. 55, spp. n., N.S.W., LOWER Trans.  
 R. Soc. S. Aust. 47.

*Batrachedra silaginea*, *microdryas* spp.  
 n. Australia p. 58, TURNER Proc. R.  
 Soc. Vict. 36.

*Borkhausenia panormitella* sp. n.  
 Sicily p. (210), REBEL Verh. zool.-bot.  
 Ges. Wien 65 1915.—*B. venturellii* sp. n.  
 Appennines, p. 67, CONSTANTINI Atti  
 Soc. Ital. Sci. nat. 62.—*B. xanthodesma*,  
 sp. n., N. Zealand p. 151, PHILPOTT  
 Trans. N. Z. Inst. 54.

*Brachyacma epichorda*, sp. n., Australia,  
 p. 163, TURNER Proc. R. Soc.  
 Queensland 31 1920.

*Brochometis* gen. n. (Gelechiidae) for  
*plexigramma* Meyr. p. 625, MEYRICK  
 Exot. Mier. 2.

*Bucculatrix statica* sp. n. Java p. 192,  
 MEYRICK Zool. Med. Leiden 6 1921.—  
*B. floccosa* p. 124, *nigripunctella* p. 125,  
 California, spp. n., BRAUN Trans.  
 Amer. Ent. Soc. 49.—*B. ulocarena*,  
 sp. n., Queensland p. 180, TURNER  
 Trans. R. Soc. S. Aust. 47.

*Cadmogenes* gen. n. (Plutellidae)  
 p. 167, *literata* sp. n. N. Zealand p. 168,  
 MEYRICK Trans. N. Z. Inst. 54.

*Calicotis triploesta* sp. n. Queensland  
 p. 78, TURNER Proc. R. Soc. Vict. 36.

*Catameces* gen. n. (Gelechiidae) *thio-*  
*phara* sp. n. Australia p. 122, TURNER  
 Proc. R. Soc. Queensland 31 1920.

*Catoryctis pericalca*, sp. n., Australia,  
 p. 56, LOWER Trans. R. Soc. S. Aust.  
 47.

*Celetodes* gen. n. (near *Homaloxestis*,  
 Gelechiidae), *dracopis* sp. n. Java p. 166,  
 MEYRICK Zool. Med. Leiden 6 1921.

*Cerostoma sarmaticella* sp. n. S.  
 Russia, p. (139), REBEL Verh. zool.-bot.  
 Ges. Wien 67 1917.—*C. parenthesellum*  
 var. n. *overhaldense* Norway p. 61,  
 STRAND Arch. Natg. 85 A 4 1920.

*Charicrata sericoleuca* sp. n. Queensland p. 168, TURNER Trans. R. Soc. S. Aust. 47.

*Chelaria isotricha*, *apparitrix* p. 164, *instaurata* p. 165 spp. n. Java, MEYRICK Zool. Med. Leiden 6 1921.

*Chersadaula* gen. n. (Oecophoridae), *ochrogaster* sp. n. N. Zealand p. 165, MEYRICK Trans. N. Z. Inst. 54.

*Choreutis phalaraspis* sp. n. Kumaon p. 617, MEYRICK Exot. Micr. 2.

*Chrysovestes* gen. n. (near *Xestocasis*, Heliodinidae), *lauta* sp. n. Java p. 176, MEYRICK Zool. Med. Leiden 6 1921.

*Coeliometopa* gen. n. (Lyonetiiidae), *hypolampes*, sp. n., Queensland, p. 181, TURNER Trans. R. Soc. S. Aust. 47.

*Coleophora obviella* sp. n. Bosnia, Austria, France p. (178), REBEL Verh. zool.-bot. Ges. Wien 64 1914.—*C. ochrea* subsp. n. *castelensis* Spain, *perseranella* Austria p. (129), *flabelligerella* N. Persia p. (130), spp. n., Id. op. cit. 69 1919.—*C. bilineatella* var. n. *broennoeella* Norway p. 70, STRAND Arch. Natg. 85 A 4 1920.—*C. troglodytella* f. n. *adustella*, *sociella* sp. n. ? Switzerland p. 342 (fig.), MÜLLER-RUTZ Mitt. Ent. Zürich 5 1920.—*C. tuscaemiliella* sp. n. Appennines, p. 69, COSTANTINI Atti Soc. ital. Sci. nat. 62.—*C. seminalis* sp. n. Java p. 189, MEYRICK Zool. Med. Leiden 6 1921.—*C. prepostera* sp. n. Montana p. 119, BRAUN Trans. Amer. Ent. Soc. 49.

*Comodica eurynipha* Queensland, *crysicoeca* N.S.W., *drepanosema* Queensland, p. 184, spp. n., TURNER Trans. R. Soc. S. Aust. 47.

*Corynaea* gen. n. (Gelechiidae) p. 129, *dilechria*, sp. n., Australia, p. 130, TURNER Proc. R. Soc. Queensland 31 1920.

*Coryptilum klugi* var. n. *biagina* New Guinea p. 165, STRAND Arch. Natg. 85 A 12 1920.

*Corythoxestis* gen. n. (near *Augasina*, Heliodinidae, type *praeustella* v. Dev.) p. 177, MEYRICK Zool. Med. Leiden 6 1921.

*Cosmopteryx zenobia* sp. n. Java p. 168, MEYRICK Zool. Med. Leiden 6 1921.—*C. phaesphora*, *chalcelata* spp. n. Queensland p. 59, TURNER Proc. R. Soc. Vict. 36.

(N-12519 j) Q

*Craspedotis diasticha*, sp. n., Australia, p. 129, TURNER Proc. R. Soc. Queensland 31 1920.

*Crobylophora psammosticta*, sp. n., Queensland, p. 176, TURNER Trans. R. Soc. S. Aust. 47.

*Crocanthes trizona*, sp. n., Australia, p. 152, TURNER Proc. R. Soc. Queensland 31 1920.

*Croesopola eudela*, sp. n., Australia, p. 160, TURNER Proc. R. Soc. Queensland 31 1920.

*Crypsicharis triplaca*, sp. n., Queensland p. 56, LOWER Trans. R. Soc. S. Aust. 47.

*Crypsithyris enixa* p. 197, *sympyrrta*, *tromerodes* p. 198 spp. n. Java, MEYRICK Zool. Med. Leiden 6 1921.

*Cryptolechia epistemon* sp. n. Formosa p. 194, STRAND Arch. Natg. 84 A 12 1920.—*C. modularis*, *fatua* spp. n. Java p. 172, MEYRICK Zool. Med. Leiden 6 1921.—*C. rhodobapta*, sp. n., N. Zealand p. 166, MEYRICK Trans. N. Z. Inst. 54.—*C. alphitias*, sp. n., N.S.W., p. 56 LOWER Trans. R. Soc. S. Aust. 47.

*Ctenioxena* gen. n. (group *Odites*, Xyloryctidae) p. 611, *crypsiptyla* sp. n. Palestine p. 612, MEYRICK Exot. Micr. 2.

*Cymatomorpha scotia*, sp. n., Australia, p. 160, TURNER Proc. R. Soc. Queensland 31 1920.

*Cymotricha* gen. n. (Gelechiidae) type *miltophragma* Meyr. p. 626, MEYRICK Exot. Micr. 2.

*Daulocoma* gen. n. (near *Bedellia*, Lyonetiiidae), *latens* sp. n. Java p. 192, MEYRICK Zool. Med. Leiden 6 1921.

*Decadarchis inclinata* sp. n. Java p. 195, MEYRICK Zool. Med. Leiden 6 1921.

*Depressaria tschorbadjiewi*, sp. n., Bulgaria p. (45), REBEL Verh. zool.-bot. Ges. Wien 66 1916.—*D. fuscovenella* Tunis p. (18), *praeustella* S. Russia p. (19), *leucostictella* Altai, *melancholica* Orenburg p. (21), *thomanella* Lower Engadine p. (23), *indecorella* Orenburg p. (25), *macrotrichella* N. Persia p. (26), spp. n., Id. op. cit. 67 1917.—*D. nordlandica* sp. n. p. 67, *flavella* var. n. *broennoeensis* p. 68

Norway, STRAND Arch. Natg. 85 A 4 1920.—*D. rhodochlora* sp. n. Cyprus p. 278, MEYRICK Entomologist 56.

*Diathryptyca callibrya* p. 172, *thetacopis* p. 173, Queensland spp. n., TURNER Trans. R. Soc. S. Aust. 47.

*Dichomeris xuthochyta, perlevis, acrogypsa* p. 168, *cirrhostola, pleuroleuca, aencylosticha* p. 169, *dysorata* p. 170, Australia, spp. n., TURNER Proc. R. Soc. Queensland 31 1920.—*D. ignorata* p. 165, *microsphena* p. 166 spp. n. Java, MEYRICK Zool. Med. Leiden 6 1921.—*D. mesoglena* Coorg, *instans* Peru p. 619, *lucrifuga, horiodes* Brazil, *brachymetra* Peru, *fida* Brazil p. 620, *thermodryas, ingloria* Peru, *saturata, baccata* p. 621, *heteraena* Brazil p. 622 spp. n., MEYRICK Exot. Micr. 2.

*Drosica memorialis* sp. n. Java p. 200, MEYRICK Zool. Med. Leiden 6 1921.

*Duvita* (?) *tahavusella* sp. n. New York p. 103, FORBES Ent. News 33 1922.

*Elachista brachyplectra, orba* spp. n. Java p. 186, MEYRICK Zool. Med. Leiden 6 1921.—*E. ochroleuca* sp. n. N. Zealand p. 167, MEYRICK Trans. N. Z. Inst. 54.—*E. egena, aphanta* spp. n. Australia p. 75, TURNER Proc. R. Soc. Vict. 36.—*E. controversa*, sp. n., California, p. 119, BRAUN Trans. Amer. Ent. Soc. 49.—*E. hedemanni*, notes on, p. 4 Thuringia, PETRY D. ent. Zs. Iris 37.

*Elachypteryx* gen. n. (Gelechiidae), *analcis, suffusca*, spp. n., Australia, p. 128, TURNER Proc. R. Soc. Queensland 31 1920.

*Encratoria* gen. n. (derivative of *Glyphipteryx*) *plumbigera* sp. n. Assam p. 618, MEYRICK Exot. Micr. 2.

*Enicostoma quinquecristata* see *Pyramidobela* gen. n.

*Entrichiria* gen. n. (near *Prays*, *Hyponomeutidae*) *amphiphracta* sp. n. Java p. 187, MEYRICK Zool. Med. Leiden 6 1921.

*Epactris tabifica, micans* spp. n. Java p. 198, MEYRICK Zool. Med. Leiden 6 1921.

*Epermenia alameda*, sp. n., California, p. 124, BRAUN Trans. Amer. Ent. Soc. 49.—*E. turatiella*, sp. n., Appennines, p. 68, COSTANTINI Atti Soc. Ital. Sci. nat. 62.

*Epicallima amplicincta*, sp. n., Ohio, p. 117, BRAUN Trans. Amer. Ent. Soc. 49.

*Epicephala stephanephora*, sp. n., Queensland p. 171, TURNER Trans. R. Soc. S. Aust. 47.

*Epimactis dissecta* sp. n. Java p. 173, MEYRICK Zool. Med. Leiden 6 1921.—*E. melithorax* sp. n. Kumaon p. 613, MEYRICK Exot. Micr. 2.

*Epimimastis catopta*, sp. n., Australia, p. 127, TURNER Proc. R. Soc. Queensland 31 1920.

*Epiphthora psolosticta* p. 109, *poliopasta, acropasta, leptocoenia* p. 110, Australia, spp. n., TURNER Proc. R. Soc. Queensland 31 1920.

*Episacta* gen. n. (Gelechiidae) p. 161, *toreuta*, sp. n., Australia, p. 162, TURNER Proc. R. Soc. Queensland 31 1920.

*Epithetica* gen. n. (Gelechiidae), *typhoscia*, sp. n., N. S. Wales, p. 165, TURNER Trans. R. Soc. S. Aust. 47.

*Erechthias acroleuca, polyplecta, mesosticha, epixantha* p. 184, *cirrhopolia, celetica, polionota* p. 185, *caustophara* p. 186, Queensland, spp. n., TURNER Trans. R. Soc. S. Aust. 47.—*E. indicans*, sp. n., N. Zealand p. 168, MEYRICK Trans. N. Z. Inst. 54.

*Ereunetis transfusa, ochrocrena* spp. n. Java p. 194, MEYRICK Zool. Med. Leiden 6 1921.

*Ethmia heliomela*, sp. n., Queensland, p. 54, LOWER Trans. R. Soc. S. Aust. 47.—*E. oblista* sp. n. Queensland p. 170, TURNER Trans. R. Soc. S. Aust. 47.

*Eucalyptira* gen. n. (near *Vanicela*, *Heliodinidae*) p. 174, *picrostis* sp. n. Java p. 175, MEYRICK Zool. Med. Leiden 6 1921.

*Eulechria deltoloma, polistis*, N. S. W., p. 55, spp. n., LOWER Trans. R. Soc. S. Aust. 47.

*Eupolis* gen. n. (near *Trichotaphe*, Gelechiidae) for *Glyphidocera stygnota* Wlsm. p. 625, MEYRICK Exot. Micr. 2.

*Euprophantis* gen. n. (near *Parectopa*, Gracilariidae), *autoglypta* sp. n. Java p. 191, MEYRICK Zool. Med. Leiden 6 1921.

*Euryssara* gen. n. (Gelechiidae),  
*pleurophaea*, sp. n., Australia, p. 167,  
 TURNER Proc. R. Soc. Queensland 31  
 1920.

*Euryzancla* gen. n. (Gelechiidae),  
*melanophylla*, *polyommata*, spp. n.,  
 Australia, p. 131, TURNER Proc. R. Soc.  
 Queensland 31 1920.

*Eutorna generalis* sp. n. Java p. 172,  
 MEYRICK Zool. Med. Leiden 6 1921.

*Gelechia rebeliella* (Haud.) p. (29),  
*klosi* (Rebel) p. (30) Austria, *baueri*  
 (Rebel) Germany p. (33) spp. n. (fig.),  
 HAUDER & REBEL Verh. zool.-bot. Ges.  
 Wien 67 1917.—*G. orbatella*, sp. n.,  
 Bulgaria, p. (162), REBEL op. cit. 68  
 1918.—*G. overhaldensis* sp. n., *virgella*  
 ab. n. *melanica* p. 63, *galbanella* var. n.  
*haareki* p. 64, *difflinis* ab. n. *groenliensis*  
 p. 65 Norway, STRAND Arch. Natg. 85  
 A 4 1920.—*G. prasinoleuca* sp. n. Java  
 p. 161, MEYRICK Zool. Med. Leiden 6  
 1921.—*G. pyramidophora*, *chalcotora*  
 spp. n., Australia, p. 123, TURNER Proc.  
 R. Soc. Queensland 31 1920.—*G. arenella*  
 sp. n. U.S.A. p. 103 (fig.), FORBES Ent.  
 News 33 1922.—*G. elaboratella* p. 119,  
*intermedia* p. 120 spp. n. Lower  
 California, BRAUN Proc. Cal. Acad. Sci.  
 12.

*Glyphypteryx clearcha* sp. n. Java p.  
 185, MEYRICK Zool. Med. Leiden 6  
 1921.—*G. compastis* sp. n. Assam p. 618,  
 MEYRICK Exot. Micr. 2.—*G. altiorella*  
 sp. n. (fig.) Tyrol, p. 167 BAUER Ent.  
 Mitt. 12.

*Gracilaria populetorum* ab. n. *simplex*,  
 var. n. *elverumensis* Norway p. 73,  
 STRAND Arch. Natg. 85 A 4 1920.—*G. alchimiella* ab. n. *restrictella* Austria  
 p. (11), REBEL Verh. zool.-bot. Ges.  
 Wien 72.—*G. scutellariella* Ohio p. 121,  
*porphyretica* N. Carolina p. 122,  
 spp. n., BRAUN Trans. Amer. Ent. Soc.  
 49.

*Haplochrois tanyptera* sp. n. Queens-  
 land p. 59, TURNER Proc. R. Soc. Vict.  
 36.

*Hapsifera acrogona* sp. n. Java p. 200,  
 MEYRICK Zool. Med. Leiden 6 1921.

*Hectacma graphicopa* sp. n. Java  
 p. 196, MEYRICK Zool. Med. Leiden 6  
 1921.

*Helcystogramma zapyrodes* p. 119,  
*euargyra* p. 120, Australia, spp. n.,  
 TURNER Proc. R. Soc. Queensland 31  
 1920.—*H. gypsaspis* sp. n. Java p. 163,  
 MEYRICK Zool. Med. Leiden 6 1921.

*Hemiaracha bleptodes* p. 132, *tetra-*  
*sticta*, *polioleuca*, *caliginosa* p. 133,  
 Australia, spp. n., TURNER Proc. R. Soc.  
 Queensland 31 1920.

*Heterozancla* gen. n. (Gelechiidae),  
*rubida*, sp. n., Australia, p. 134, TURNER  
 Proc. R. Soc. Queensland 31 1920.

*Heterozyga sporadarcha* sp. n. Java  
 p. 171, MEYRICK Zool. Med. Leiden 6  
 1921.

*Hierocrobyla lophocera*, sp. n., Queens-  
 land, p. 180, TURNER Trans. R. Soc.  
 S. Aust. 47.

*Hierodoris frigida*, sp. n., N. Zealand,  
 p. 153, PHILPOTT Trans. N. Z. Inst. 54.

*Hieroxestis leucoprosopa*, sp. n.,  
 Queensland p. 186, TURNER Trans. R.  
 Soc. S. Aust. 47.

*Hilarographa ferox* sp. n. Java p. 179,  
 MEYRICK Zool. Med. Leiden 6 1921.—*H. olympica*, sp. n., Washington p. 118,  
 BRAUN Trans. Amer. Ent. Soc. 49.

*Hoplophanes chalcophaedra* sp. n.  
 N. S. Wales p. 71, TURNER Proc. R. Soc.  
 Vict. 6.

*Hypsolophus nitiellus* sp. n. Italy  
 p. 106, COSTANTINI N. Beiträge system.  
 Insektenk. 2.

*Idiobela* gen. n. (Gelechiidae) *ischno-*  
*tila*, sp. n., Australia, p. 111, TURNER  
 Proc. R. Soc. Queensland 31 1920.

*Illantis* gen. n. (near *Dicasteris*,  
 Elachistidae) p. 186, *picroleuca* sp. n.  
 Java p. 187, MEYRICK Zool. Med. Leiden  
 6 1921.

*Imma chlorospila*, *leucomystis* spp. n.  
 Fiji p. 616, MEYRICK Exot. Micr. 2.—*I. endocrossa*, *pelurga* spp. n. Java p. 180,  
 MEYRICK Zool. Med. Leiden 6 1921.

*Incurvaria pectinea* abb. n. *conjuncta*,  
*plicata*, *plicatula* Europe p. 76, STRAND  
 Arch. Natg. 85 A 4 1920.

*Irianassa poecilaspis* sp. n. Assam  
 p. 616, MEYRICK Exot. Micr. 2.

*Ichnoscia crebrescens* sp. n. Java  
 p. 199, MEYRICK Zool. Med. Leiden 6  
 1921.

*Isonomeutis restincta*, sp. n., N. Zealand p. 166, MEYRICK Trans. N. Z. Inst. 54.

*Isorrhoea pandani* p. 76, *loxoschema* p. 77 spp. n. Australia, TURNER Proc. R. Soc. Vict. 36.

*Iulota ischnora*, *phauloptila*, spp. n., Australia, p. 112, TURNER Proc. R. Soc. Queensland 31 1920.

*Izatha manubriata*, sp. n., N. Zealand, p. 165, MEYRICK Trans. N. Z. Inst. 54.—*I. planetella* sp. n. N.Z. p. 218, HUDSON Ent. Mo. Mag. 59.

*Labdia oxycharis*, *compar* spp. n. Java p. 168, MEYRICK Zool. Med. Leiden 6 1921.—*L. rhadinopis*, *euphrantica*, *crocotypa* p. 60, *calthula*, *orthoschema*, *mitrophora* p. 61, *ischnotypa*, *argophracta*, *hexaspila*, *ochrostephana* p. 62, *ancylosema*, *tristoecha*, *rheocosticha* p. 63, *triploa*, *niphostephes*, *niphocera* p. 64, *pantophyrtta*, *leuconota*, *zonobela*, *pammeces* p. 65 spp. n. Australia, TURNER Proc. R. Soc. Vict. 36.

*Lampronia fuscoleuca*, sp. n., California p. 127, BRAUN Trans. Amer. Ent. Soc. 49.

*Lecithocera chamela* p. 155, *alampes* p. 156, Australia, spp. n., TURNER Proc. R. Soc. Queensland 31 1920.

*Lepidoscia monosticha* Queensland, *chrysastra* W. Australia p. 187, spp. n., TURNER Trans. R. Soc. S. Aust. 47.

*Leptogenes* gen. n. (near *Odites*, Xyloryctidae), *auguralis* sp. n. Java p. 173, MEYRICK Zool. Med. Leiden 6 1921.

*Lepyrotica* gen. n. (near *Syrmologa*, Tineidae), *scardamyctis* sp. n. Leeward Is. p. 199, MEYRICK Zool. Med. Leiden 6 1921.

*Leucoptera argodes*, *strophidota*, *plagiomitra* p. 176, *chalcoleura*, *melanolitha*, *argyroptera*, *iolitha* p. 177 Queensland, *diasticha* N.S.W., *toxeres*, *ashlopasta* Queensland p. 178, spp. n., TURNER Trans. R. Soc. S. Aust. 47.—*L. coffeella*, *bionomics*, Box Bull. Ent. Res. 14 pp. 133–145.

*Leuroptila* gen. n. (Plutellidae), *tephropasta*, sp. n., Queensland, p. 172, TURNER Trans. R. Soc. S. Aust. 47.

*Limnoecia loxoscia*, sp. n., N.S.W., p. 57, LOWER Trans. R. Soc. S. Aust. 47.—*L. enclista* sp. n. Java p. 168, MEYRICK Zool. Med. Leiden 6 1921.—*L. platyochra*, *elaphropa* p. 68, *pallidula*, *cirrhosema*, *orbicera*, *cirrhozona* p. 69, *leucomita*, *platyscia*, *symplecta*, *adiacrita* p. 70, *leptozena*, *hemimitra* p. 71, spp. n. Australia, TURNER Proc. R. Soc. Vict. 36.

*Liozancla* gen. n. (Gelechiidae), *holophaea*, sp. n., Australia p. 127, TURNER Proc. R. Soc. Queensland 31 1920.

*Lissocarena* gen. n. (Heliodinidae) p. 80, *semicuprea* sp. n. Queensland p. 81, TURNER Proc. R. Soc. Vict. 36.

*Lissochroa* gen. n. (Hyponomeutidae) p. 170, *argostola* sp. n. Queensland p. 171, TURNER Trans. R. Soc. S. Aust. 47.

*Lita tachyptiella*, sp. n., Bulgaria p. (44), REBEL Verh. zool.-bot. Ges. Wien 66 1916.

*Lithocolletis hauderella*, larva and pupa described pp. (153)–(154), HAUDER Verh. zool.-bot. Ges. Wien 64 1914.—*L. guicciardiella* p. 69, *bentivoliella*, *petrazzaniella* p. 70, spp. n. (figs.), Appennines, COSTANTINI Atti Soc. Ital. Sci. nat. 62.—*L. viburnella*, sp. n., Ohio p. 120, BRAUN Trans. Amer. Ent. Soc. 49.

*Loboptila* gen. n. (Gelechiidae), *leurodes*, sp. n., p. 159, TURNER Proc. R. Soc. Queensland 31 1920.

*Lyonetia embolotyta*, *acromelas* p. 180, *photina* p. 181, Queensland, spp. n., TURNER Trans. R. Soc. S. Aust. 47.

*Macrozancla* gen. n. (Gelechiidae), *mendica*, sp. n., Australia, p. 130, TURNER Proc. R. Soc. Queensland 31 1920.

*Megacraspedus aenictodes*, sp. n., Australia, p. 112, TURNER Proc. R. Soc. Queensland 31 1920.—*M. dolosellus* larva p. 156, DE JOANNIS, biology, p. 158, TROUVELOT Bull. Soc. ent. Fr. 1923.

*Melasina evagata* sp. n. Java p. 201, MEYRICK Zool. Med. Leiden 6 1921.

*Mesopherna epomadia*, *niphopasta*, spp. n., Queensland, p. 191, TURNER Trans. R. Soc. S. Aust. 47.

*Metasticha* gen. n. (near *Tinissa*, Tineidae), *centrodoxa* sp. n. Java p. 196, MEYRICK Zool. Med. Leiden 6 1921.

*Microcolona tumulifera* sp. n. Java p. 169, MEYRICK Zool. Med. Leiden 6 1921.—*M. spaniospila* sp. n. Queensland p. 75, TURNER Proc. R. Soc. Viet. 36.

*Mictopsichia stemmatias* sp. n. Celebes p. 178, MEYRICK Zool. Med. Leiden 6 1921.

*Monopis brachyaspis* sp. n. Java p. 197, MEYRICK Zool. Med. Leiden 6 1921.—*M. cerrhospila* N. Australia, *ochroptila* Queensland, p. 193, spp. n., TURNER Trans. R. Soc. S. Aus. 47.

*Myrmecozela erecta* sp. n. Lower California p. 121, BRAUN Proc. Cal. Acad. Sci. 12.

*Myrophila* gen. n. (Gelechiidae) for *carycina* (type), *caryophagma*, *diacnista* British Guiana p. 624, *traumatias* Borneo p. 625 spp. n., MEYRICK Exot. Mier. 2.

*Mythographa* gen. n. (Gelechiidae) for *chartaria* Meyr. p. 626, MEYRICK Exot., Mier. 2.

*Narycia cirrhosticha*, *euthygramma* p. 187, *myriospila*, *phaeostola*, *sinuosa* Queensland, *melanospora* N.S.W. p. 188, *ischnomorpha*, *leucochroa*, *conioptila*, *lechriotypa* Queensland, *acropolia* Victoria p. 189, *niphospila* Queensland, *tetramocha* N.S.W., *dicranota* Queensland p. 190 spp. n., TURNER Trans. R. Soc. S. Aus. 47.—*N. epomias*, *subaenea* spp. n. Java p. 201, MEYRICK Zool. Med. Leiden 6 1921.—*N. petrodoxa* sp. n., N. Zealand, p. 169, MEYRICK Trans. N. Z. Inst. 54.

*Nemophora fioriella* sp. n. Italy p. 107, COSTANTINI N. Beiträge system. Insektenk. 2.

*Nemotois pecuniosa* sp. n. Sumatra p. 202, MEYRICK Zool. Med. Leiden 6 1921.

*Noechrista* gen. n. (Gelechiidae) for *Noeza auritogata* Wlsm. p. 625, MEYRICK Exot. Mier. 2.

*Neossiosynoea* gen. n. (Oecophoridae) p. 171, *scatophaga* sp. n. N. Queensland p. 172, habits p. 173, TURNER Trans. Ent. Soc. 1923.

*Nothris apentheta*, *acromelas* p. 164, *centrospila*, *cyrtopleura* p. 165, *mesophracta* p. 166, Australia, spp. n., TURNER Proc. R. Soc. Queensland 31 1920. *N. malacodes* see *Acribololga* gen. n.

*Odites diacentra*, *praefixa* spp. n. Java p. 174, MEYRICK Zool. Med. Leiden 6 1921.

*Oinophila leptorrhiza* sp. n. Java p. 193, MEYRICK Zool. Med. Leiden 6 1921.

*Onebala fibularis* sp. n. Java p. 167, MEYRICK Zool. Med. Leiden 6 1921.

*Opogona chlorophaea*, *debilis* spp. n. Java p. 193, MEYRICK Zool. Med. Leiden 6 1921.—*O. papayae*, *crypsipyrta*, *flabilis*, spp. n., Australia, p. 182, TURNER Trans. R. Soc. S. Aust. 47.

*Opostega chalcoplethes* W. Australia p. 178, *brithys*, *monotypa*, *ulypha*, *phaeospora*, *centrospila* p. 179, *phaeopasta* p. 180 Queensland, spp. n., TURNER Trans. R. Soc. S. Austr. 47. *O. costantiniella*, sp. n., Appennines, p. 70, COSTANTINI, Atti Soc. Ital. Sci. nat. 62.

*Orneodes xanthosticta* sp. n. Queensland p. 58, TURNER Proc. R. Soc. Viet. 36.

*Ornix tenella*, sp. n., Hungary, p. (131), REBEL Verh. zool.-bot. Ges. Wien 69 1919.—*O. blandella* sp. n. no locality p. 343 (fig.), MÜLLER-RUTZ Mitt. Ent. Zürich 5 1920.

*Orthenches porphyritis* Meyr., *cuprea* Meyr. a variety of, p. 168, MEYRICK Trans. N. Z. Inst. 54.—*O. liparochroa*, *pleurosticta*, spp. n., Queensland p. 173, TURNER Trans. R. Soc. S. Austr. 47.

*Orthomicta argonota* p. 71, *semifumea* p. 72, spp. n. Queensland, TURNER Proc. R. Soc. Viet. 36.

*Pachnistis nubivaga* sp. n. Java p. 167, MEYRICK Zool. Med. Leiden 6 1921.

*Pachyrhabda fissa* p. 175, *spectata* p. 177 spp. n. Java, MEYRICK Zool. Med. Leiden 6 1921.—*P. Stathmopoda cryrodes* Turn. referred to, *hygrophaes*, *adela* p. 79, *capnoscia*, *xanthoscia* p. 80 spp. n. Queensland, TURNER Proc. R. Soc. Viet. 36.

*Pachysaris paenitens* sp. n. Brazil p. 626, MEYRICK Exot. Micr. 2.

*Palaeoneura* gen. n. (Tineidae) *amictopis*, sp. n., W. Australia p. 186, TURNER Trans. R. Soc. S. Aust. 47.

*Pancoenia pygmaea*, sp. n., Australia, p. 148, TURNER Proc. R. Soc. Queensland 31 1920.

*Paraperittia* gen. n. (Elachistidae), *uniformella*, sp. n., Austria, p. (12), REBEL Verh. zool.-bot. Ges. Wien 66 1916.

*Paraphyllis pamphaea* Queensland p. 173, *diatoma* N.S.W., *stichogramma* Queensland, *ochrocerata* N. Territory, p. 174, spp. n., TURNER Trans. R. Soc. S. Aust. 47.

*Parectopa actinosema*, sp. n., Queensland p. 171, TURNER Trans. R. Soc. S. Aust. 47.—*P. aellomacha* Meyr., synonyms of, p. 167, MEYRICK Trans. N. Z. Inst. 54.—*P. clethrata*, sp. n., S. Australia p. 57, LOWER Trans. R. Soc. S. Aust. 47.

*Pauroneura brachysticha*, sp. n., Australia, p. 121, TURNER Proc. R. Soc. Queensland 31 1920.

*Penestoglossa balcanica*, sp. n., (fig.) Dalmatia, p. (134), REBEL Verh. zool.-bot. Ges. Wien 69 1919.

*Phaeoses* gen. n. (Lyonetiidae) p. 98, *sabinella* sp. n. p. 100 Louisiana (figs.), FORBES Ent. News 33 1922.

*Phanerocetena* gen. n. near *Elachista* p. 75, *spodopasta*, *homopsara*, *pentasticta* spp. n. Queensland p. 76, TURNER Proc. R. Soc. Vict. 36.

*Phelotropa conversa* sp. n. French Guiana p. 614, MEYRICK Exot. micr. 2.

*Philodoria picturiella* p. 294, *picturiata* p. 295, spp. n. Hawaii, SWEZENY Proc. Hawaiian Ent. Soc. 5.

*Phthorimaea silignitis*, *nonyma* p. 125, *plaesiosema* p. 126, Australia, spp. n., TURNER Proc. R. Soc. Queensland 31 1920.

*Phycodes venerea* sp. n. Java p. 181, MEYRICK Zool. Med. Leiden 6 1921.

*Phyllocnistis eurymochla*, *diplomochla*, *leptomianta* spp. n., Queensland p. 175, TURNER Trans. R. Soc. S. Aust. 47.

*Picrodoxa* gen. n. (Glyphipterygidae) *harpodes* sp. n. S. India p. 617, MEYRICK Exot. Micr. 2.

*Picroxena* gen. n. (Chlidanotidae) p. 160, *scoriura* sp. n. Java p. 161, MEYRICK Zool. Med. Leiden 6 1921.

*Pleurota modestella*, sp. n., Bulgaria, p. (45), REBEL Verh. zool.-bot. Ges. Wien 66 1916.—*P. obtusella* Thian Shan, *chalepensis* Crete p. (53), *albarracina* Oran p. (54), *indecorella* Beirut p. (55), spp. n., Id. op. cit. 67 1917.—*P. bicostella* f. n. *caliginella* Aragno p. 341, MÜLLER-RUTZ Mitt. Ent. Zürich 5 1920.

*Plutella maculipennis* f. n. *unicolor* Switzerland p. 345, MÜLLER-RUTZ Mitt. Ent. Zürich 5 1920.—*P. incarnella* var. n. *norvegicella* Norway p. 62, STRAND Arch. Natg. 85 A 4 1920.

*Prays parilis* Queensland, *amblystola* N.S.W., p. 168, spp. n., TURNER Trans. R. Soc. S. Aust. 47.

*Proboloptila* gen. n. (Lyonetiidae) with type (*Ereunetes*) *frontella* Wlsm., p. 195, MEYRICK Zool. Med. Leiden 6 1921.

*Proctolopha* gen. n. (Tineidae) *parnassiella* sp. n. Greece p. (56) (fig.), REBEL Verh. zool.-bot. Ges. Wien 65 1915.

*Prodosiarcha glagera*, sp. n., Australia, p. 129, TURNER Proc. R. Soc. Queensland 31 1920.

*Prosomura* gen. n. (Gelechiidae) p. 147, *symmetra*, sp. n., Australia p. 148, TURNER Proc. R. Soc. Queensland 31 1920.

*Protanytis* gen. n. (near *Ptilosticha*, Heliodinidae), *chalybastra* sp. n. Java p. 177, MEYRICK Zool. Med. Leiden 6 1921.

*Prothamnodes* gen. n. (near *Odites*, Xyloryctidae), *platycyla* sp. n. Burma p. 613, MEYRICK Exot. Micr. 2.

*Protolechia hilara*, *euryarga* p. 135, *leptosticta*, *elassopis* p. 136, *creberrima*, *hypocneca*, *melicrata* p. 137, *mitophora*, *enchotypha* p. 138, *furcifera* p. 139, *phloeopola*, *chalazodes* p. 140, *pyrrhica*, *megalosticta*, *blacica* p. 141, *albifrons*, *involuta* p. 142, *gypsocrana*, *annularia*,

*taracta* p. 143, *sporodeta*, *mesopsamma* p. 144, *hedana*, *celidophora* p. 145, *eustephana*, *semiographa* p. 146, *lechriosema* p. 147, Australia, spp. n., TURNER Proc. R. Soc. Queensland 31 1920.

*Psacaphora annulata* p. 116, *diffficilis* p. 117, spp. n. Ohio, BRAUN Trans. Amer. Ent. Soc. 49.

*Pseudodoxia scotias* sp. n. Java p. 171, MEYRICK Zool. Med. Leiden 6 1921.

*Ptilodoxa* gen. n. (Elachistidae) p. 185, *lorigera* sp. n. Java p. 186, MEYRICK Zool. Med. Leiden 6 1921.

*Prochorycitis ochrograpta* Burma, *cero-*  
*morpha* Assam spp. n. p. 612, MEYRICK Exot. Micr. 2.

*Pycnobela* gen. n. (Lyonetiidae) p. 182, *aplectodes* sp. n. N. Queensland p. 183, TURNER Trans. R. Soc. S. Austr. 47.

*Pyramidobela* gen. n. (Ethmidae) for *Enicostoma quinquecristata* p. 118, BRAUN Trans. Amer. Ent. Soc. 49.

*Pyretaulax* gen. n. (near *Batrachedra*, *Cosmopterygidae*), *miltogramma* sp. n. Java p. 170, MEYRICK Zool. Med. Leiden 6 1921.

*Pyrgoptila penthistis* sp. n. N.S.W. p. 54, LOWER Trans. R. Soc. S. Austr. 47.

*Pyroderces*, *mesoptila* Meyr., *terminella* Wilk., *pyrrhodes* Meyr., *aulacosema* Low. referred to, *pogonias* p. 66, *hapalodes*, *tenuilinea* p. 67, spp. n. Australia, TURNER Proc. R. Soc. Vict. 36.

*Rhadinophylla* gen. n. (Gelechiidae), *siderosema*, sp. n., Australia, p. 166, TURNER Proc. R. Soc. Queensland 31 1920.

*Sagalassa platysema* sp. n. Java p. 180, MEYRICK Zool. Med. Leiden 6 1921.—*S. poecilota*, sp. n., Queensland p. 166, TURNER Trans. R. Soc. S. Aust. 47.

*Sarisophora* gen. n. (Gelechiidae) p. 152, *tenella*, *terrena* p. 153, *nyctiphylax*, *leucoscia* p. 154, *pycnospila* p. 155, Australia, spp. n., TURNER Proc. R. Soc. Queensland 3 1920.

*Sarocrania* gen. n. (Tineidae), *ischno-*  
*phylla*, sp. n., Queensland p. 193, TURNER Trans. R. Soc. S. Aust. 47.

*Sarotorna myrrhina*, sp. n., Australia, p. 126, TURNER Proc. R. Soc. Queensland 31 1920.

*Scindalmota* gen. n. (Gelechiidae) p. 121, *limata*, sp. n., Australia p. 122, TURNER Proc. R. Soc. Queensland 31 1920.

*Scythris hungaricella*, sp. n., Hungary, p. (212), REBEL Verh. zool.-bot. Ges. Wien 67 1917.—*S. thomanni* f.n. *unicolor* Switzerland p. 344, MÜLLER-RUTZ Mitt. Ent. Zürich 5 1920.—*S. fumida* sp. n. Queensland p. 76, TURNER Proc. R. Soc. Vict. 36.—*S. divaricata* sp. n. Lower California p. 121, BRAUN Proc. Cal. Acad. Sci. 12.—*S. reducta* p. 122, *anthracina* p. 123 California, spp. n., BRAUN Trans. Amer. Ent. Soc. 49.

*Semiomeris* gen. n. (Gelechiidae) for *pyretodes* Meyr. p. 626, MEYRICK Exot. Micr. 2.

*Simaethis tigroides* p. 181, *semicincta*, *irimochla* p. 182, *pelargodes*, *optica* p. 183, *obarata* p. 184 spp. n. Java, MEYRICK Zool. Med. Leiden 6 1921.—*S. lygaeopa*, sp. n., Queensland p. 166, TURNER Trans. R. Soc. S. Aust. 47.

*Snellenia miltocrossa* sp. n. N.S.W. p. 81, TURNER Proc. R. Soc. Vict. 36.

*Solenobia wehrlii* sp. n. Switzerland p. 248 (fig.), MÜLLER-RUTZ Mitt. Ent. Zürich 5 1920.—*S. norvegica* sp. n. Norway p. 74, STRAND Arch. Natg. 85 A 4 1920.

*Stagmatophora notoleuca* sp. n., *oxy-*  
*toma*, *autotoma*, *tetradesma*, *argyro-*  
*strepta*, *clinarcha* Meyr. referred to, p. 68, TURNER Proc. R. Soc. Vict. 36.

*Stathmopoda dactylas* sp. n. Java p. 175, MEYRICK Zool. Med. Leiden 6 1921.—*S. distincta*, sp. n., N. Zealand p. 152, PHILPOTT Trans. N. Z. Inst. 54.—*S. coracodes* sp. n., *mysteriastis* Meyr. (= *seminuda*, Philp.) p. 167 N. Zealand, MEYRICK Trans. N. Z. Inst. 54.—*S. platynipha*, *acromolibda*, *aphano-*  
*sema* p. 78, *pampolia*, *ceramoptila* spp. n., *cryerodes* Turn. referred to *Pachy-*  
*rhabda* p. 79, Queensland, TURNER Proc. R. Soc. Vict. 36.

*Stegasta tenebricosa*, sp. n., Australia, p. 124, TURNER Proc. R. Soc. Queensland 31 1920.

*Stenoma dasyneura* p. 614, *ambiens*, *oxyscia*, *ferculata* p. 615 spp. n. French Guiana, MEYRICK Exot. Micr. 2.

*Stomopteryx maledicta* sp. n. Java p. 162, MEYRICK Zool. Med. Leiden 6 1921.

*Styloceros brachymita*, *dispila*, *concinna* p. 157, *isophanes*, *noseropa* p. 158, Australia spp. n., TURNER Proc. R. Soc. Queensland 31 1920.

*Swammerdamia conspersella* ab. n. *moensis* Norway p. 58, STRAND Arch. Nat. 85 A 4 1920.

*Symmoca hispanella* p. (49), *pleostigmella* p. (51), *sericeella* p. (52), Spain, spp. n., REBEL Verh. zool.-bot. Ges. Wien 67 1917.

*Syncathartis* gen. n. (near *Toiana*, Hyponomeutidae) p. 187, *argestis* sp. n. Java p. 188, MEYRICK Zool. Med. Leiden 6 1921.

*Syndesmica*, gen. n. (Gelechiidae), *homogenes*, sp. n., Australia, p. 150, TURNER Proc. R. Soc. Queensland 31 1920.

*Syntomactis macrostola* p. 72, *fumea*, *acrocyrta*, *tephronota* p. 73, *acromianta*, *crassipalpis*, *spodoptera* p. 74, spp. n. Australia, TURNER Proc. R. Soc. Vict. 36.

*Tanygona* gen. n. (Cosmopterygidae) p. 115, *lignicolorella*, sp. n., p. 116, Ohio, BRAUN Trans. Amer. Ent. Soc. 49.

*Tanymita* gen. n. (Tineidae), *hypocra*, sp. n., N. Queensland, p. 192, TURNER Trans. R. Soc. S. Aust. 47.

*Tarphyscelis cirrhozona* sp. n. Java p. 189, MEYRICK Zool. Med. Leiden 6 1921.

*Teleia trifasciella*, sp. n., Bulgaria p. (44), REBEL Verh. zool.-bot. Ges. Wien 66 1916.

*Telephila* gen. n. (Gelechiidae) for *schmidtiella* Heyd. p. 626, MEYRICK Exot. Micr. 2.

*Telphusa nigrimaculata* sp. n. Lower California p. 118, BRAUN Proc. Cal. Acad. Sci. 12.

*Thiotricha hamulata* sp. n. Java p. 162, MEYRICK Zool. Med. Leiden 6 1921.—*T. acrocelea*, *prosoestea* p. 116, *panglycera* p. 117, *argyrea*, *acroniphia*,

*hemiphaea* p. 118, Australia, spp. n., TURNER Proc. R. Soc. Queensland 31 1920.

*Thyrsostoma tanyrrhina* sp. n. Java p. 162, MEYRICK Zool. Med. Leiden 6 1921.

*Thyrsotarsa* gen. n. (near *Tarphyscelis*, Hyponomeutidae), *platybyrsa* sp. n. Java p. 188, MEYRICK Zool. Med. Leiden 6 1921.

*Tinea turicensis* sp. n. Switzerland p. 348 (fig.), MÜLLER-RUTZ Mitt. Ent. Zürich 5 1920.—*T. proletaria* sp. n. Java p. 199, MEYRICK Zool. Med. Leiden 6 1921.—*T. lapella*, development p. 301, HESSE Zts. wiss. Insektenbiol. 18.—*T. niphoplaca* N. Australia p. 193, *drymonoma*, *trigonosema* Queensland, *pherauges* N.S.W., *diacrita* Queensland, p. 194, spp. n., TURNER Trans. R. Soc. S. Aust. 47.

*Tischeria explosa*, sp. n., California p. 126, BRAUN Trans. Amer. Ent. Soc. 49.

*Tisobarica habromorpha*, sp. n., N.S.W., p. 54, LOWER Trans. R. Soc. S. Aust. 47.

*Trachypepla roseata*, sp. n., N. Zealand p. 152, PHILPOTT Trans. N. Z. Inst. 54.

*Trigonophylla* gen. n. (Gelechiidae), p. 170, *tarachodes*, sp. n., Australia, p. 171, TURNER Proc. R. Soc. Queensland 31 1920.

*Ussara iochrysa* sp. n. Java p. 184, MEYRICK Zool. Med. Leiden 6 1921.

*Vazugada percnacma* sp. n. Brazil, Peru p. 623, MEYRICK Exot. Micr. 2.

*Xanthospilapteryx syringella*, life history pp. 368–400, STÄGER Mitt. Entomologia Zürich 6.

*Xylesthia albicans*, sp. n., California p. 126, BRAUN Trans. Amer. Ent. Soc. 49.

*Xyrosaris acroxutha*, sp. n., Queensland p. 168, TURNER Trans. R. Soc. S. Aust. 47.

*Xystophora scutatella* sp. n. Switzerland p. 341 (fig.), MÜLLER-RUTZ Mitt. Ent. Zürich 5 1920.

*Zanclarches* gen. n. (near *Mompha*, Cosmopterygidae), *fastosa* sp. n. Java p. 169, MEYRICK Zool. Med. Leiden 6 1921.

*Zanclopseustis* gen. n. (near *Prothiodes* Tineidae) p. 196, *mucronata* sp. n. Java p. 197, MEYRICK Zool. Med. Leiden 6 1921.

*Zelleria orthopleura, euthysema, panceutes* Queensland, *perimeces* Victoria p. 167 spp. n., TURNER Trans. R. Soc. S. Aust. 47.

#### HEPIALIDAE.

*Hepialus humuli* abb. n. *dannenbergi*, *pusillus* Europe p. 46, STEPHAN Soc. ent. 38.

*Porina descendens* sp. n. N.Z. p. 180, HUDSON Ent. Mo. Mag. 59.—*P. mimica*, sp. n., N. Zealand p. 153, *senex* Huds., female described, p. 153, PHILPOTT Trans. N. Z. Inst. 54.

Scent organs in New Zealand Trichoptera, p. civ, MOSELY Proc. Ent. Soc. 1922.

Trichoptera in Zürich Alps pp. 406–407, RIS Mitt. Entomologia Zürich 6.

Trichoptera in springs in Holstein pp. 126–134, 179–186 (fig.), THIENE-MANN Zs. wiss. Insektenbiol. 18.

Cephalic glands of larva of Trichoptera, Russ. An. Acad. Române 31 pp. 309 figs. *L - from M. 269*

*Lithax niger* in Belgium p. 329, LESTAGE Ann. Biol. lacustre 12.

*Oxyethira costalis*, habits p. 358, SPANDL Zs. wiss. Insektenbiol. 18.

*Phryganea grandis* habits 357, SPANDL Zs. wiss. Insektenbiol. 18.—  
†*P. kryshtofovichi* sp. n. Tertiary rocks Siberia p. 794 (figs.), COCKERELL Nature, 112 1923. *L - from M. 269*

## ZEUGLOPTERA

(MICROPTERYGIDAE s.l.)

Mouth-parts of Micropterygoidea p. 181 (figs.), relation with Trichoptera p. 208, TILLYARD Trans. Ent. Soc. 1923.

A study of venation of N. Zealand species of Micropterygidae, pp. 155–161, PHILPOTT Trans. N. Z. Inst. 54.

*Sabatinca aenea* sp. n. N.Z. p. 181, HUDSON Ent. Mo. Mag. 59.—*S. demissa* sp. n., *incongruella* Wlk. early stages, N. Zealand p. 154, PHILPOTT Trans. N. Z. Inst. 54.—*S. passalota*, sp. n., N. Zealand p. 169, MEYRICK Trans. N. Z. Inst. 54.

## NEUROPTERA, MECOPTERA.

Notes on Australian Myrmeleontidae and Mantispidae, synonymy and lists of spp., pp. 576–598 ESBEN-PETERSEN Proc. Linn. Soc. N. S. Wales 48.

Panorpidae from Tjibodas (Java) pp. 381–383 (fig.), KARNY Treubia 3.

Notes on Sisyridae, p. 25, KRÜGER Stettin. ent. Zg. 84.

Studies on the Dilaridae of Japan, KUWAYAMA Trans. Sapporo Nat. Hist. Soc. 8 1921 pp. 51–83 1 pl.

Notes on some Neuroptera Planipennia, LESTAGE Bull. Soc. ent. Belg. 5 pp. 43–46.

Biology and morphology of German Chrysopidae, PARISER Arch. Natg. 83 A 11 (1917) 1919, pp. 1–57, 2 pl. 26 text figs.

The Neuropterous Fauna of Albania, PONGRÁCZ Magyar. Tud. Akad. Balkan-kut tud. ered. 1 pp. 143–166.

Morphology and systematics of Hungarian Chrysopidae pp. 161–221, figs., PONGRÁCZ Allat. Közlem. 11 1912.

## TRICHOPTERA.

Trichoptera of the Pribilof Islands, Alaska, p. 146, BANKS N. Amer. Fauna 46.

Gilson glands in Trichoptera p. 83 (fig.), BROCHER Ann. Biol. lacustre 12.

Morphology of head of Trichopterous larvae p. 31, KRAFKA J. N. Y. Ent. Soc. 31.

Bibliography of Chilean Neuroptera pp. 168–181, PORTER Rev. chil. Hist. nat. 27.

Hemerobiidae in Zürich Alps p. 406, RIS Mitt. Entomologia Zürich 6.

Life-histories and stages of some Hemerobiids and allied species, SMITH Ann. Ent. Soc. Amer. 16 pp. 129–151.

Key to New Zealand Hemerobiidae p. 220, TILLYARD Trans. N. Z. Inst. 54.

Key to genera of Crocini p. 274, systematic notes p. 269 figs., WITHERYCOMBE Trans. Ent. Soc. 1923.

*Adeloplectron* gen. n. (Myrmeleonidae) *testaceum* sp. n. Australia p. 577 fig. ESBEN-PETERSEN Proc. Linn. Soc. N.S.W. 48.

*Austrogymnognemia australis* sp. n. Australia p. 579 figs., ESBEN-PETERSEN Proc. Linn. Soc. N.S.W. 48.

*Balanopteryx incerta* sp. n. Congo p. 53, LACROIX Ann. Soc. linn. Lyon 67 1921.

*Berotha geyri* p. 152, *saharica* p. 153 spp. n. Sahara fig., ESBEN-PETERSEN Arch. Natg. 84 A 9, 1920.

*Boreus borealis* sp. n. fig. Pribilof Islands, Alaska, p. 158, BANKS N. Amer. Fauna 46.

*Boriomyia geyri* sp. n. Sahara p. 154 (fig.), ESBEN-PETERSEN Arch. Natg. 84 A 9, 1920.—*B. rava* sp. n. Surrey p. 202 fig., WITHERYCOMBE Entomologist 56.—*B. maorica* sp. n. (fig.) N. Zealand p. 221, TILLYARD Trans. N. Z. Inst. 54.

*Ceratoleon mjöbergi* sp. n. Australia p. 579 fig., ESBEN-PETERSEN Proc. Linn. Soc. N.S.W. 48.

*Chrysacanthia* gen. n. (Chrysopidae) for esbeniana sp. n. Madras p. 120 figs., LACROISE Bull. Soc. ent. Fr. 1923.

*Chrysopa*, biology of *prasina* group p. 119, LACROIX Ann. Soc. linn. Lyon 69.—*C. lemoulti* sp. n. New Caledonia p. 119, LACROIX Bull. Soc. ent. Fr. 1923.—*C. nigrovenosa* sp. n. p. 213, *aspersa* var. n. *maculata* p. 196, *formosa* var. n. *frontalis* p. 201, *vulgaris* var. n. *minor*, *notata*, *fulviceps*, *rufostigmata* p. 208, summary in German p. 259, key p. 215, and revision of Hungarian spp., PONGRÁCZ Allat. Közlem. 11

1912.—*C. luederwaldti* sp. n. Brazil p. 771, NAVÁS Rev. Mus. Paul. 13.—*C. riveti* sp. n. Macedonia, p. 154 fig., NAVÁS Bull. Mus. Hist. nat. Paris 1923.

*Colobopterus karukerae* sp. n. Guadeloupe p. 51, LACROIX Ann. Soc. linn. Lyon 67 1921.

*Coniopteryx falciger* sp. n. (fig.) Java, p. 384, KARNY Treubia 3.

*Corydalus*, Brazilian pp. 17–18 (fig.), NAVÁS Chac. e Quin. 28.

*Creoleon maurus* sp. n. Tunisia p. 340, NAVÁS Bull. Soc. Hist. nat. Afr. N. 14.

*Croce damareae* see *Thysanocroce*.

*Dictyoleon* gen. n. (Myrmeleonidae) p. 584, *nervosus* sp. n. Fiji Islands p. 585 fig., ESBEN-PETERSEN Proc. Linn. Soc. N.S.W. 48.

*Dilar japonicus* var. n. *gracilis* Japan pp. 51–83, KUWAYAMA Trans. Sapporo Nat. Hist. Soc. 8 1921.

*Ecdyurus forcipula* and *fluminum* systematic value of ♂ genitalia, figs., pp. 119–129, 202, PONGRÁCZ Allatt. Közlem. 15 1916.

*Drepanacra binocula* var. n. *excisa* *divisa*, *bilineata* p. 224, *suboculata* p. 225, N. Zealand, TILLYARD Trans. N. Z. Inst. 54.

*Formicaleo hilli* sp. n. Australia p. 582 fig., ESBEN-PETERSEN Proc. Linn. Soc. N.S.W. 48.

*Geyria* gen. n. (Myrmeleonidae) p. 146, *saharica* sp. n. Sahara p. 147 fig., ESBEN-PETERSEN Arch. Natg. 84 A 9 1920.

*Hapoglenius dupuyi* sp. n. Brazil p. 773 (fig.), NAVÁS Rev. Mus. Paul. 13.

†*Hemerobius resinatus* Hag. see *Pro-lachlanius*.—*H. moestus* Hag. see *Pro-spadobius*.

*Heteroleon apicalis*, *pulchellus* spp. n. Australia p. 583 (figs.), ESBEN-PETERSEN Proc. Linn. Soc. N.S.W. 48.

*Hydropsyche guttata* and *ornatula*, systematic value of genitalia, figs., pp. 119–120, 202, PONGRÁCZ Allatt. Közlem. 15 1916.—*H. emarginata* p. 159, *protecta* p. 160 Macedonia spp. n. figs., NAVÁS Bull. Mus. Hist. nat. Paris 1923. → *Trichoptera*

*Ithona hexaspilota* ab. n. *12-punctata*  
Japan p. 16, KANO Mthly. Common  
Insect Mag. 1 no. 3.

*Limnophilus hengeri* sp. n. Albania,  
p. 158 (fig.), NAVÁS Bull. Mus. Hist.  
nat. Paris 1923. → to *Ticloptera*

*Macronemurus lacroixi* sp. n. Morocco  
p. 339, NAVÁS Bull. Soc. Hist. nat. Afr.  
N. 14.

*Micromus bifasciatus* sp. n. p. 221,  
*bifasciatus* var. n. *amabilis* p. 222,  
*tasmaniae* var. n. *manapouriensis*,  
*negroscriptus* p. 223 (fig.) N. Zealand,  
TILLYARD Trans. N. Z. Inst. 54.—*M.  
weryae* sp. n. Belgian Congo p. 196,  
LESTAGE Rev. zool. afr. 11.

*Myrmeleon formicarius* notes p. 34,  
MEISSNER Ent. Zs. 37.—*M. malus* see  
*Stenogymnocnemia*.

*Nelees braunsi* sp. n. S. Africa, p.  
433, NAVÁS D. ent. Zs. 1923.

*Neuroleon gracilis* sp. n. Sahara p.  
145 (fig.), ESBEN-PETERSEN Arch.  
Natg. 84 A 9 1920.

*Nina joppana* sp. n. Palestine p.  
281 figs., WITHYCOMBE Trans. Ent.  
Soc. 1923.

*Nophis teillardi* redescription, p. 150,  
ESBEN-PETERSEN Arch. Natg. 84 A 9  
1920.

*Nosybus*, systematic position and  
African species pp. 182–191 (fig.),  
LESTAGE Rev. zool. afr. 11.

†*Nymphes mengeanus* Hag. see *Pro-  
nymphes*.

†*Osmylopsychops* gen. n. (Prohe-  
merobiidae), *spillerae* sp. n. Upper  
Triassic, Queensland p. 496 fig.,  
TILLYARD Proc. Linn. Soc. N.S.W.  
48.

*Palpare speciosus* subsp. n. *capensis*  
S. Africa, p. 432 (fig.), NAVÁS D. ent.  
Zs. 1923.

*Panorpa* forms from N. France p.  
50, 9 figs., KRAUSSE Arch. Natg. 83 A  
1 1919.

*Platyleon* gen. n. (Myrmeleontidae)  
*froggatti* sp. n. N. S. Wales p. 578 fig.,  
ESBEN-PETERSEN Proc. Linn. Soc.  
N.S.W. 48.

†*Proberotha* gen. n. (Berothidae)  
*prisca* sp. n. p. 81 Baltic amber,  
KRÜGER Stettin. ent. Zg. 84.

†*Prolacchlanius* gen. n. for *Hemerobius  
resinatus* Hag. p. 88 Baltic amber,  
KRÜGER Stett. ent. Zg. 84.

†*Pronymphes* gen. n. for *Nymphes  
mengeanus* Hagen p. 75 Baltic amber,  
KRÜGER t.c.

†*Prophlebonema* gen. n. *resinata* sp.  
n. p. 85 Baltic amber, KRÜGER t.c.

†*Propsychoptisis* gen. n. *helmi* sp. n.  
p. 84 Baltic amber, KRÜGER t.c.

†*Prospadobius* gen. n. for *Hemero-  
bius moestus* Hag. p. 90 Baltic amber,  
KRÜGER t.c.

*Protobiella* gen. n. (Berothidae) p.  
218, *zelandica* sp. n. (fig.) p. 219 N.  
Zealand, TILLYARD Trans. N. Z. Inst.  
54.

*Pterocroce storeyi* sp. n. Egypt p.  
277 (figs.), WITHYCOMBE Trans. Ent.  
Soc. 1923.—*P. storeyi* larva p. 263  
(figs.), ELTRINGHAM, WILLMER &  
WILLIAMS Trans. Ent. Soc. 1923.

*Raphidia* larval development p. 301,  
HESSE Zts. wiss. Insektenbiol. 18.—  
*R. granulifera* sp. n. Macedonia, p.  
155 (fig.), NAVÁS Bull. Mus. Hist. nat.  
Paris 1923.—*R. ophiopsis* notes on, p.  
30, STÄGER Soc. ent. 38.—*R. maculicollis*  
wing venation, p. 33 figs., WITHY-  
COMBE Entomologist 56.

*Stenogymnocnemia* gen. n. (Myrme-  
leonidae) genotype *Myrmeleon malus*  
Walk. Australia p. 581 fig., ESBEN-  
PETERSEN Proc. Linn. Soc. N.S.W. 48.

*Stenophylax aduncus* sp. n. Salonica,  
p. 158 fig., NAVÁS Bull. Mus. Hist. nat.  
Paris 1923. → to *Ticloptera*.

*Taeniopteryx beali* sp. n. Macedonia  
p. 56 fig., NAVÁS t.c. → to *Neoptera* p. 222

*Theleproctophylla australis* var. n.  
*impar* Macedonia, Salonica, p. 154,  
NAVÁS t.c.

*Thysanocroce* gen. n. (Nemopteridae)  
for *Croce damarae* McL. (=lightfooti  
Pér.) S. Afr., pp. 276 & 284 figs., WITHY-  
COMBE Trans. Ent. Soc. 1923.

## DIPTERA.

Diptera from the Arctic Ural pp. 111–115, BECKER Wiener Ent. Ztg. 40.

Identification and synonymy of Diptera found in Hawaii, pp. 290–292, BRYAN Proc. Hawaiian Ent. Soc. 5.

Corrections to list of Diptera of Oregon, pp. 205–209, COLE Ent. News 34.

List of Diptera of Moravia pp. 182–234, CZIŽEK Zs. Mähr. Landesmuseums 6 1906.

Diptera of Moravian caves pp. 27–28, CZIŽEK Zs. Mähr. Landesmuseums 15 1916.

Keys to families and subfamilies of Nematocera, pp. 265, 273, 289, 301, 330, EDWARDS Trans. N. Z. Inst. 54.

A contribution to the biology of N. American Diptera pp. 82–87, GREENE Proc. Ent. Soc. Wash. 25 1923.

Diptera in Hawaii pp. 265–269, ILLINGWORTH Proc. Hawaiian Ent. Soc. 5.

Diptera ectoparasitic on other insects pp. 135–136, JACOBSON Tijdschr. Ent. 66.

Biology of German Diptera, 40 pp. (fig.), LINDNER Biol. Tiere Deutschlands Teil 38.

Catalogue of Tipuliform Diptera of France, PIÈRRE Ann. Soc. linn. Lyon, 65 1919 pp. 63–76 67 1921 pp. 73–77.

Notes on New Guinea Nematocera Polyneura pp. 129–144, figs., RIEDEL Ann. Mus. Nat. Hung. 18 1921.

List of fungicolous Diptera pp. 37–44, RIEL Ann. Soc. linn. Lyon 67 1921.

Notes on mosquitoes and other blood-sucking flies from Porto Rico pp. 394–405 5 figs., ROOT Amer. J. Hyg. 2.

Notes on Diptera of New Zealand pp. 91–100, TONNOIR Bull. Soc. ent. Belg. 5.

## CECIDOMYIIDAE.

*Colomyia corticis* sp. n. Java p. 540, EDWARDS Ann. Mag. N. H. (9) 12.

*Diadiplosis pseudococci* sp. n. British Guiana p. 255, FELT Zoologica 3.

*Ficiomyia* gen. n., *perarticulata* sp. n. Florida p. 5, FELT Florida Ent. 6 1922.

*Miastor*, occurrence, life-cycle and maintenance under artificial conditions, HARRIS Psyche 30 pp. 95–101 & C.R. Soc. Biol. 88 pp. 256–258.—*M. hastatus* paedogenesis p. lxxxiii, WITHEYCOMBE Proc. Ent. Soc. 1922.

## MYCETOPHILIDAE.

Mycetophilidae of Moravia pt. 3 pp. 14–93, LANDROCK Zs. Mähr. Landesmuseums 14 1914; pt. 4 op. cit. pp. 17–75 17 1919.

Mycetophilidae of Moravia pp. 163–171, LANDROCK Wiener ent. Ztg. 40.

†*Allodia winnertzi* sp. n. Baltic amber p. 14, MEUNIER Rev. sci. Bourbnn. 1923.—*A. subelata* sp. n. (fig.) Pribilof Islands p. 178, MALLOCH N. Amer. Fauna 46.

†*Cordyla rhenana* sp. n. p. 86 fig., MEUNIER Misc. ent. 26.

†*Docosia elegantula*, *meijerei* spp. n. (fig.) p. 16 Baltic amber, MEUNIER Rev. sci. Bourbnn. 1923.—*D. pseudovalida*, *selosa* p. 63, *moravia* p. 64 spp. n. Moravia, characters of, and key to Moravian spp., figs., LANDROCK Zs. Mähr. Landesmuseums 15 1916.

†*Dziedzickia sedula* p. 20, *hadro-neuroides* p. 21 spp. n. Baltic amber, MEUNIER Rev. sci. Bourbnn. 1923.

†*Empheria bella* sp. n. Baltic amber p. 22, MEUNIER t.c.

†*Loewiella brevitarvis* sp. n. Baltic amber p. 23, MEUNIER t.c.

*Macrocerca sudetica* sp. n. Moravia p. 166, LANDROCK Wiener ent. Ztg. 40.—*M. beringensis* sp. n. Pribilof Islands p. 177, MALLOCH N. Amer. Fauna 46.

*Mycetobia pallipes*, larva pp. 277–298 (figs.), ROCH Arch. Natg. 85 A 2 1920.

†*Mycomyia aristei* sp. n. amber, Colombia, p. 331, COCKERELL Amer. J. Sci. 5.

†*Palaeoempalia notata* p. 17, *servata* p. 18, *ornata*, *urbana* p. 19 spp. n. Baltic amber, MEUNIER Rev. sci. Bourbnn. 1923.

*Polyxena moravica* sp. n. Moravia p. 68, LANDROCK Zs. Mähr. Landesmuseums 14 1914.

*Sciara unguiculata* sp. n. Pribilof Islands p. 180, MALLOCH N. Amer. Fauna **46**.

†*Sciromorpha* gen. n., *johannseni* p. 25, *scelerosa* p. 26 spp. n. (fig.) Baltic amber, MEUNIER Rev. sci. Bourdonn. **1923**.

*Syndocia* gen. n. near *Docosia* p. 81, *cremea* p. 82, *pervallida* p. 83 Ethiopia spp. n., SPEISER Wiener ent. Ztg. **40**.

†*Tetragoneura passa* p. 28, *fixa* p. 29, *detecta* p. 30 spp. n. Baltic amber, MEUNIER Rev. sci. Bourdonn. **1923**.

#### BIBIONIDAE.

*Bibio rufithorax* male described p. 62, *alienus* p. 62, *afer*, *velorum*, p. 64, N. Carolina, spp. n., MCATEE Proc. Ent. Soc. Wash. **25**.—*B. simplicis* sp. n. Alberta p. 245, CURRAN Canad. Ent. **55**.

#### SCATOPSIDAE.

*Reichertella capensis* sp. n. Cape Town p. 67, ENDERLEIN Stett. ent. Zg. **84**.

*Rhegmoclema peringueyi* sp. n. Durban p. 67, ENDERLEIN t.c.

#### SIMULIIDAE.

Occurrence of Simuliidae in Swiss Alps p. 40, GALLI-VALERIO Centralbl. Bakt. I Abt. **90**.

*Chirostilbia flavifemur* sp. n. Brazil p. 79, ENDERLEIN SitzBer. Ges. natf. Freunde **1921** 1922.

*Edwardsellum squamosum* Cameroon, *cinctulum* Egypt, spp. n. p. 80, ENDERLEIN t.c.

*Gomphostilbia ceylonica* sp. n. p. 77, ENDERLEIN t.c.

*Simulium cocoons* pp. 85–90, TONNOIR Bull. Soc. ent. Belg. **5**.—*S. limbatum* sp. n. E. Africa p. 78, ENDERLEIN SitzBer. Ges. natf. Freunde **1921** 1922.—*S. diversipes* sp. n. Rodriguez Is. p. 333, EDWARDS Ann. Mag. N. H. (9) **12**.—*S. sergenti* sp. n. (fig.) Algeria p. 652, EDWARDS Arch. Inst. Pasteur Algérie **1**.

#### BLEPHAROCERIDAE.

Blepharocerid larva and pupa described from Morocco p. 23, ALLUAUD Bull. Soc. Sci. nat. Maroc. **3**.

Notes on the Blepharoceridae of New Zealand p. 260, table of larvae p. 264, CAMPBELL Trans. N. Z. Inst. **54**.

The genera of the family Blepharoceridae, key p. 267, CURRAN Canad. Ent. **55**.

Larvae and pupae of Australian Blepharoceridae pp. 47–60, TONNOIR Austr. Zool. **3**.

*Bibionus* gen. n. p. 266, *griseus* sp. n. Alberta p. 268, CURRAN Canad. Ent. **55**.

*Edwardsina australiensis* p. 136, *tillyardi* p. 138 figs. spp. n. Australia, TONNOIR Austr. Zool. **3**.

*Philorus aylmeri* sp. n. Alberta p. 244, GARRETT Canad. Ent. **55**.

#### CHIRONOMIDAE.

Critical study of the Meigen collection of Chironomidae pp. 120–129, GOETGHEBUER Bull. Soc. ent. Belg. **5**.

Remarks on identity of species described &c. by Abreu (1918) p. 297, KIEFFER Ann. Soc. sci. Bruxelles **40** 1921.

Chironomidae of Equatorial Africa, KIEFFER Ann. Soc. ent. Fr. **92** pp. 149–204.

Descriptions of larvae of Chironomidae from China p. 506 (figs.), LENZ Intern. Rev. Hydrobiol. **11**.

Larvae and metamorphosis of Chironomidae pp. 32–109, SPÄRCK Ent. Medd. **14**.

Differentiation of species in Chironomidae pp. 835–850, THIENEMANN Arch. Hydrobiol. Supp. Vol. **2** 1921.

Metamorphosis of Tanypinae, pt. 2, pp. 655–784, 76 text-figs., keys to larvae and pupae, ZAVŘEL & THIENEMANN Arch. Hydrobiol. Supp. Vol. **2** 1921.

*Apelma bacoti* sp. n. Sierra Leone p. 55, INGRAM & MACFIE Bull. Ent. Res. **14**.

*Atrichopogon celibatum* p. 48, *hirsutipennis* p. 49, *melanum* p. 50, *natalensis* p. 52, *turneri* p. 53, S. Africa, spp. n., INGRAM & MACFIE t.c.

*Bezzia pilipennis* sp. n. Lapland p. 674 (figs.), LUNDSTRÖM Nat. Unt. Sarekgeb. 4 1917.—*B. aquatilis* sp. n. p. 105, *nobilis* ♂ described Belgium p. 106, GOETGHEBUER Ann. Biol. lacustre 12.—*B. sieberti* sp. n. Courland p. 277, KIEFFER Ann. Soc. sci. Bruxelles 40 1921.—*B. africana* S. Africa p. 71, (*Probazzia*) *mashonensis* Mashonaland p. 73 spp. n., INGRAM & MACFIE Bull. Ent. Res. 14.

*Brillia*, metamorphosis and classification p. 70 (fig.), SPÄRCK Ent. Medd. 14 1922-1923.

*Campiocladius* metamorphosis pp. 809-834, THIENEMANN Arch. Hydrobiol. Supp. Vol. 2 1921.—*C. flaviventris*, *fuscoventris*, *aphyllus*, *albifolium*, *fuscofolium*, *atrinotatus* spp. n. Courland p. 289, KIEFFER Ann. Soc. sci. Bruxelles 40 1921.—*C. foliaceus*, *binodus* p. 789, *hexatomus* p. 790, *pentaplastus* p. 791, *foenius* p. 793, *pentasema* p. 794 spp. n. C. Europe, KIEFFER Arch. Hydrobiol. Supp. Vol. 2 1921.—*C. longicosta* p. 185, *kribiensis* p. 186 spp. n. Kamerun, KIEFFER Ann. Soc. ent. Fr. 92.—*C. formosanus*, *despectus*, spp. n. Formosa p. 39, KIEFFER Ann. Soc. linn. Lyon 69.—*C. punctatellus* sp. n. Belgium p. 112 figs., GOETGHEBUER Ann. Biol. lacustre 12.

*Ceratobezzia nigeriae* sp. n. Nigeria p. 68, INGRAM & MACFIE Bull. Ent. Res. 14.

*Ceratopogon aescnousuga* p. 137  
*pectinunguis* p. 138 (figs.) spp. n. Sumatra, DE MEIJERE Tijdschr. Ent. 66.

*Chironomus pilosidens* p. 185, *despectus* p. 186 Paraguay, *sieberti* p. 280 Courland spp. n., KIEFFER Ann. Soc. sci. Bruxelles 40 1921.—*C. meigeni* p. 785, *rectilobus* p. 786 spp. n., *defectus* var. n. *subdefectus* p. 787 C. Europe, KIEFFER Arch. Hydrobiol. Supp. Vol. 2 1921.—*C. cristatus* biology p. 15 figs., BRANCH J. N. Y. Ent. Soc. 31.—*C. pseudosimplex* p. 116, *severini* (= *viridis* Wulp nec Kieffer nec Schiner) p. 114 spp. n. Belgium figs., GOETGHEBUER Ann. Biol. lacustre 12.—*C. bihamatus* p. 27, *cruciifer* p. 28 spp. n. Formosa, KIEFFER Ann. Soc. linn. Lyon 69.—*C. niligenus* p. 149, *niloticus* (fig.) p. 150 spp. n. Sudan, KIEFFER Ann. Soc. ent. Fr. 92.—*C. obtusilobus* p. 171, *deviatus*, *conformis* p. 172

Pribilof Islands spp. n. fig., MALLOCH N. Amer. Fauna 46.—*C.*, research from Aristotle to the present time, THIENEMANN D. ent. Zs. 1923.

*Cladopelma apicale* sp. n. Formosa p. 30, KIEFFER Ann. Soc. linn. Lyon 69.

*Cladotanytarsus fulvofasciatus* sp. n. fig. Sudan p. 176, KIEFFER Ann. Soc. ent. Fr. 92.

*Clinochironomus* gen. n. p. 281, genotype *vulpinus* sp. n. p. 282 Courland, KIEFFER Ann. Soc. sci. Bruxelles 40 1921.

*Clinotanypus niligena* sp. n. Sudan p. 186, KIEFFER Ann. Soc. ent. Fr. 92.

*Clinotanytarsus* gen. n. *nilicola* sp. n. Sudan p. 169, KIEFFER Ann. Soc. ent. Fr. 92.

*Coelotanypus flavus* sp. n. Texas p. 296, KIEFFER Bull. Soc. ent. Fr. 1922.

*Corynoneura antennalis* p. 807, *bifurcata* p. 808 spp. n. C. Europe, KIEFFER Arch. Hydrobiol. Supp. Vol. 2 1921.

*Cricotopus attenuatus* p. 800, *niger* p. 801, *pallidus* p. 802, *fusciforceps*, *hyalinus* p. 803, *rivicola* p. 804 spp. n., *limnanthemi* var. n. *tarsalis* p. 805, C. Europe, KIEFFER Arch. Hydrobiol. Supp. Vol. 2 1921.—*C. carbonarius* sp. n. Formosa p. 38, KIEFFER Ann. Soc. linn. Lyon 69.—*C. rodriguensis* sp. n. Rodriguez Is. p. 332, EDWARDS Ann. Mag. N. H. (9) 12.

*Cryptochironomus* key to species p. 273, *pararostratus* sp. n. p. 279 Breslau (?) figs., HARNISCH Zool. Jahrb. Abt. f. system. 47.—*C. lacteipennis* sp. n. Formosa p. 183, KIEFFER Ann. Soc. Sci. Bruxelles 40 1921.—*C. fuscitarsis* p. 154, *leucopus* p. 156, *aculeatus* p. 157, *longiventris* p. 157, *nilophilus* p. 158, *ocularis* p. 159, *baeus* p. 159, *nudiforceps* p. 160, *albiforceps* p. 160, *nilicola* p. 611, *niloticus* p. 162, *pumilio* p. 161, *diceras* p. 163, *lacteiforceps* p. 163, *fasciatus* p. 164 Sudan, *subfusiformis* p. 158, *pygmaeus* p. 165, Kamerun spp. n. figs., KIEFFER Ann. Soc. ent. Fr. 92.—*C. nudiforceps* p. 30, *leucopterus*, *viridiclavata* p. 31, spp. n. Formosa, KIEFFER Ann. Soc. linn. Lyon 69.

*Culicoides adersi* Kenya p. 56,  
*bedfordi* Transvaal p. 57, spp. n.,  
 INGRAM & MACFIE Bull. Ent. Res. 14.—  
*C. polystictus* Paraguay p. 181, *cordatus*,  
*ciliipes* p. 275 Courland, spp. n., KIEFFER Ann. Soc. sci. Bruxelles 40 1921.—  
*C. albihalter* sp. n. C. Europe p. 785,  
 KIEFFER Arch. Hydrobiol. Supp. Vol. 2 1921.—*C. citrinellus* p. 674,  
*sahariensis* p. 678 spp. n. fig. Biskra,  
 KIEFFER Arch. Inst. Pasteur Algérie 1.

*Dactylocladius mercieri* sp. n. Calvados fig. p. 10, KIEFFER Ann. Soc. ent. Belg. 63.—*D. petraeus* sp. n. C. Europe p. 796, KIEFFER Arch. Hydrobiol. Supp. Vol. 2 1921.—*D. nilicola* sp. n. Sudan, p. 182, KIEFFER Ann. Soc. ent. Fr. 92.

*Dasyhelea bihamata* p. 667, *bicrenata* p. 668, *bifurcata* p. 669, *parcepilosa* p. 670, *monilicornis* p. 671, spp. n., *begueti* var. n. *biskraensis* p. 672 Biskra fig., KIEFFER Arch. Inst. Pasteur Algérie 1.—*D. bolei* sp. n. Gold Coast p. 54, INGRAM & MACFIE Bull. Ent. Res. 14.

*Dyscamptocladius* metamorphosis pp. 833–834, THIENEMANN Arch. Hydrobiol. Supp. Vol. 2 1921.

*Endochironomus nigricoxis* p. 277, *flavicoxis* p. 279 spp. n., *miki* var. n. *maritima* p. 278, Courland, KIEFFER Ann. Soc. sci. Bruxelles 40 1921.

*Forcipomyia armaticrus* p. 661, *cattaneii* p. 662, *sahariensis* p. 663, *sulfurea* p. 664 spp. n., *seneveti* var. n. *biskraensis* p. 665 Biskra fig., KIEFFER Arch. Inst. Pasteur Algérie 1.—*F. papilionivora* sp. n. N. Wales p. 23, EDWARDS Ann. Trop. Med. & Parasit. 17.—*F. karnyi* sp. n. Java, p. 183, EDWARDS Treubia 3.—*F. plurialis* sp. n. Maryland, MALLOCH Ent. News 34.—*F. piceus* larval and pupal stages, FREW Ann. App. Biol. 10 pp. 409–441 14 figs.

*Glyptotendipes formosae* sp. n. Formosa p. 29, KIEFFER Ann. Soc. linn. Lyon 69.—*G. fulvofasciatus* sp. n., *brevifilis* var. n. *inclusus*, Courland p. 283, KIEFFER Ann. Soc. sci. Bruxelles 40 1921.

*Heterotanytarsus* gen. n. for *Metroclemus apicalis* Kieffer p. 92 (fig.), SPÄRCK Ent. Medd. 14.

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*Heterotrissocladius* gen. n. for *Metroclemus longicollis*, *triangulifer* and *cubitalis* Kieffer p. 94, SPÄRCK Ent. Medd. 14.

*Hexatanytarsus* gen. n. *albiradix* sp. n. Kamerun, p. 170, KIEFFER Ann. Soc. ent. Fr. 92.

*Holoconops mediterraneus* distribution and biology in Sahara p. 684, FOLEY & PICOUT-LAFOREST Arch. Inst. Pasteur Algérie 1.

*Jenkinsia accraensis* sp. n. Gold Coast p. 41, INGRAM & MACFIE Bull. Ent. Res. 14.

*Kribiobius* gen. n. *modestus* sp. n. Kamerun p. 165, KIEFFER Ann. Soc. ent. Fr. 92.

*Kribiocladius* gen. n. *flava* sp. n. Kamerun p. 181, KIEFFER t.c.

*Kribiopelma* gen. n. *albida* sp. n. Kamerun, p. 168, KIEFFER t.c.

*Macroptilum nigeriae* Nigeria p. 43, *aethiopicum* Zululand p. 45 spp. n., INGRAM & MACFIE Bull. Ent. Res. 14.

*Metroclemus distylus* p. 805, *apicalis* p. 806, spp. n. C. Europe, KIEFFER Arch. Hydrobiol. Supp. Vol. 2 1921.—*M. metamorphosis* p. 78 fig., *apicalis* see *Heterotanytarsus* gen. n., *longicollis*, *triangulifer* and *cubitalis* see *Heterotrissocladius* gen. n., SPÄRCK Ent. Medd. 14.

*Microconops (?) longipalpis* p. 657, *rufiventris* p. 658 Biskra spp. n. (fig.), KIEFFER Arch. Inst. Pasteur Algérie 1.

*Microtendipes schencklingi* sp. n. Courland p. 285, KIEFFER Ann. Soc. sci. Bruxelles 40 1921.

*Nilodorum heterochirius* sp. n. Trinidad p. 184, KIEFFER Ann. Soc. sci. Bruxelles 40 1921.

*Nilotanypus* gen. n. *remotissimus* sp. n. (fig.) Sudan p. 191, KIEFFER Ann. Soc. ent. Fr. 92.

*Orthocladius trifidus* p. 794, *divisus* p. 795 spp. n. C. Europe, KIEFFER Arch. Hydrobiol. Supp. Vol. 2 1921.—*O. doloplastoides* sp. n. Lapland p. 670 figs., LUNDSTRÖM Nat. Unt. Sarekgeb. 4 1917.

*Palpomyia ashantii* Gold Coast p. 64, *nigeriae* p. 67, (*Dicrohelea*) *grahami* p. 65 Nigeria spp. n., INGRAM & MACFIE Bull. Ent. Res. 14.

*Parachironomus* larva p. 515 (figs.), LENZ Intern. Revue Hydrobiol. 11.

*Paratanytarsus longiceps* p. 172, *kribiensis* p. 172, *brevitibia* p. 174, *brevicornis* p. 174, *sessilis* p. 175 Kamerun, *hirtipes* p. 173, *niloticus* p. 175 Sudan spp. n., KIEFFER Ann. Soc. ent. Fr. 92.

*Paratendipes tristictus* sp. n. Formosa p. 33, KIEFFER Ann. Soc. linn. Lyon 69.

*Pentapedilum riparium* sp. n. Courland p. 286, KIEFFER Ann. Soc. sci. Bruxelles 40 1921.—*P. kribiensis* sp. n. Kamerun p. 166, KIEFFER Ann. Soc. ent. Fr. 92.—*P. larva* p. 512 figs., LENZ Intern. Revue Hydrobiol. 11.

*Phaenocladius metamorphosis* pp. 809–834, THIENEMANN Arch. Hydrobiol. Supp. Vol. 2 1921.—*P.*, early terrestrial stages, p. 453 (figs.), LENZ Arch. Hydrobiol. 14.—*P. rupicola* sp. n. Calvados fig. p. 11, KIEFFER Ann. Soc. ent. Belg. 63.

*Phytochironomus fractilobus* p. 151 Sudan, *kribicola* p. 152 Kamerun spp. n. figs., KIEFFER Ann. Soc. ent. Fr. 92.

*Polypedilum unifasciatum*, *bellipes*, p. 34, *tetrasema*, *octosema* p. 35, *ciliatum*, *flaviscapus* p. 36, *albicollum*, *leucopteron* p. 37, spp. n. Formosa, KIEFFER Ann. Soc. linn. Lyon 69.

*Probezzia nitidiventris* sp. n. Belgium p. 104 (fig.), GOETGHEBUER Ann. Biol. lacustre 12.

*Prochironomus formosanus* p. 32, *atrinervis* p. 33 spp. n. Formosa, KIEFFER Ann. Soc. linn. Lyon 69.

*Procladius brevipalpis* sp. n. Paraguay p. 183, KIEFFER Ann. Soc. sci. Bruxelles 40 1921.—*P. profundorum* Holstein, *flavidus* Texas spp. n. p. 297, KIEFFER Bull. Soc. ent. Fr. 1922.—*P. vitripennis* sp. n. Java, p. 182, EDWARDS Treubia 3.

*Proriethia ploenensis* sp. n. p. 272, KIEFFER Ann. Soc. sci. Bruxelles 40, 1921.

*Protenthes punctipennis* var. n. *americanus* Texas p. 297, KIEFFER Bull. Soc. ent. Fr. 1922.—*P. brevipalpis* sp. n. fig. p. 187, var. n. *obscurus* p. 189 Sudan, KIEFFER Ann. Soc. ent. Fr. 92.

*Psectrocladius formosae* sp. n. Formosa p. 40, KIEFFER Ann. Soc. linn. Lyon 69.—*P. foliaceus* p. 797, *vicus* p. 798 spp. n. C. Europe, KIEFFER Arch. Hydrobiol. Suppl. vol. 2 1921.

*Psectrotanypus brevicornis* sp. n. Silesia, p. 296, KIEFFER Bull. Soc. ent. Fr. 1922.—*P. cygnus* sp. n. fig. p. 202, Sudan, KIEFFER Ann. Soc. ent. Fr. 92.

*Rosenia* gen. n. *pallida* sp. n. fig. Kamerun p. 167, KIEFFER Ann. Soc. ent. Fr. 92.

*Smittia* genus described, *arctica* sp. n. fig. Pribilof Islands p. 175, MALLOCH N. Amer. Fauna 46.

*Sphaeromias turneri* sp. n. S. Africa p. 63, INGRAM & MACFIE Bull. Ent. Res. 14.

*Stilobezzia ugandae* sp. n. Uganda p. 62, INGRAM & MACFIE Bull. Ent. Res. 14.—*S. sahariensis* sp. n. fig. Biskra p. 681, KIEFFER Arch. Inst. Pasteur Algérie 1.

*Tanypus ariasi* sp. n. Courland p. 296, KIEFFER Ann. Soc. sci. Bruxelles 40 1921.—*T. fuscoclava* sp. n. Formosa p. 40, KIEFFER Ann. Soc. linn. Lyon 69.—*T. digitatus* p. 193 Kamerun, *pictipes* p. 194, *variiforceps* p. 195, *marginatus*, *reductus* p. 196 Sudan, *rufus* p. 197 Kamerun, *congoensis*, *bicinctus* p. 198 Belgian Congo, *subrectus* Kamerun, *niloticus* p. 200 Sudan, *appendiculatus* p. 201, *kribiensis* p. 202 Kamerun, spp. n. figs. KIEFFER Ann. Soc. ent. Fr. 92.—*T. nigroscutellatus* p. 107, *maxi*, *muranus* p. 109, *subincurvatus* p. 110 spp. n. Belgium, key to spp. p. 112 figs., GOETGHEBUER Ann. Biol. lacustre 12.

*Tanytarsus* larva p. 61 (fig.), BREHM Zool. Anz. 56.—*T. semivillosus* p. 117, *heusdensis* p. 118 spp. n. Belgium figs., GOETGHEBUER Ann. Biol. lacustre 12.—*T. nilobius* sp. n. Sudan, p. 176, KIEFFER Ann. Soc. ent. Fr. 92.—*T. formosa* sp. n. Formosa p. 38, KIEFFER Ann. Soc. linn. Lyon 69.

*Tetrabezzia argentea* sp. n. Nigeria p. 70, INGRAM & MACFIE Bull. Ent. Res. 14.

*Thysanognathus monostictus* sp. n. Zanzibar, p. 60, INGRAM & MACFIE Bull. Ent. Res. 14.

*Trichocladius foliatus* p. 797, *bryophilus* p. 800 spp. n. C. Europe, KIEFFER Arch. Hydrobiol. Suppl. Vol. 2 1921.—*T. lobatus*, *microsandalum* p. 293, *calosandalum* p. 294 spp. n. Courland, KIEFFER Ann. Soc. sci. Bruxelles 40 1921.—*T. marinus* var. n. *quadrifasciatus* Slesvig-Holstein p. 14, KIEFFER Ann. Soc. ent. Belg. 63.—*T. atriclava* p. 182, *albiclava* p. 183, *pictiventris* p. 184, *kribiensis* p. 184 spp. n. Kamerun figs., KIEFFER Ann. Soc. ent. Fr. 92.

*Trichotanypus appropinquatus* sp. n. Lapland p. 673 figs., LUNDSTRÖM Nat. Unt. Sarekgeb. 4 1917.—*T. niloticus* p. 189, *polytomus* p. 190, spp. n. Sudan, KIEFFER Ann. Soc. ent. Fr. 92.—*T. lacteiclapa* sp. n. Formosa p. 41, KIEFFER Ann. Soc. linn. Lyon 69.

*Triassocladus equitans* sp. n. fig. Colorado p. 397, CLAASSEN Kansas Univ. Sci. Bull. 14.

*Zavrelia kribiensis* sp. n. Kamerun p. 167 KIEFFER Ann. Soc. ent. Fr. 92.

#### CULICIDAE.

A revision of the Culicine Mosquitos of India, BARRAUD Ind. J. Med. Res. 10 & 11 1923 pp. 772–788, 934–942, 214–228 & 475–505 48 pls.

List of Mosquitos from Dutch Guiana, BONNE-WEPSTER & BONNE Insec. Insc. Mens. 11 pp. 123–127.

The Mosquitos of Panama, DYAR Insc. Insc. Mens. 11 pp. 167–186.

Biology and distribution of Culicidae in Switzerland pp. 38–40, GALLI-VALERIO Centralbl. Bakt. 1 abt. 90.

Biology of Anophelinae, pp. 373–375, 438–442, GRASSI Atti Accad. Naz. Lincei 32.

The early stages of W. African Mosquitos, pp. 409–442, MACFIE & INGRAM Bull. Ent. Res. 13.

Mosquito identification in U.S.A., KOMP Pub. Health Repts. 38 1923 pp. 1061–1080 17 figs.

Generic classification of Culicidae p. 575, MARTINI Zool. Jahrb., Syst. 46.

Anophelines of N.E. America (fig.) pp. 57–64, MATHESON & SHANNON Insec. Insc. Mens. 11.

A list of Brazilian Culicidae, PERY-ASSÚ A Folha Medica 4 pp. 61, 69, 74, 85.

(N-12519 j) Q

List of Argentine Culicinae, p. 91, PETROCCHI Rev. Inst. Bact. 3.

A study of the mosquitos of France, SÉGUY Paris 1923 225 pp., 201 figs.

Catalogue of Indian Culicidae, SENIOR-WHITE Calcutta 1923, 124 pp.

Notes on early stages of Culicidae, STADTMANN-AVERFELD D. ent. Zs. 1923 p. 120 figs.

Survey of breeding places of mosquitos in N. Wales, WRIGHT Ann. Trop. Med. & Parasit. 17 pp. 539–547.

*Aedes chaetotaxy* p. 552, MARTINI Zool. Jahrb., Syst., 46.—*A. desbansi* p. 205 France, *albineus* p. 206 Algeria, *praeteritus* p. 207 France spp. n., SEGUY Ann. Soc. ent. Fr. 92.—*A. hevitti* sp. n. Br. Columbia p. 5 [= *mutatus* Dyar, p. 265], HEARLE Can. Ent. 55.—*A. riparius*, redescription p. 89, *flavescens* habits in America p. 92, *vinnipegensis* Dyar a var. of *hirsuteron* Theo. p. 94, DYAR Insec. Ins. Menstr. 11.—*A. cacotheius* sp. n. Wyoming p. 44, MACGILLIVRAY Insec. Ins. Menstr. 11.—*A. meigenanus* gynandromorph pp. 317–343 (figs.), BRELJE Arch. mikr. Anat. 100.

*Aedes (Aedimorphus) haworthi* sp. n. Dar-es-Salaam, p. 499, EDWARDS Trans. R. Soc. Trop. Med. & Hyg. 16.—*A. (A.) lamborni* sp. n. Nyasaland p. 398, EDWARDS Bull. Ent. Res. 13.—*A. (A.) nummatus* sp. n. Bengal p. 4, Id. op. cit. 14.

*Aedes (Finlaya) deccana* pp. 217 & 221 (larva), *lepchana* p. 217, *stevensonii* p. 219, *prominens* pp. 228, 489 India spp. n. fig., BARRAUD Ind. J. Med. Res. 11 1923.—*A. (Finlaya) shortti* p. 405, *elsiae*, *cacharana*, *greigi* p. 406, *khasiana*, *harveyi* p. 407, spp. n. India, *assamensis* Theo. distinct from *gubernatoris* Giles p. 408, BARRAUD Bull. Ent. Res. 13.

*Aedes (Skusea) iyengari* sp. n. Bengal p. 4, EDWARDS Bull. Ent. Res. 14.

*Aedes (Stegomyia)* key to adults India p. 784, *edwardsi* sp. n. p. 784 fig. India, BARRAUD Ind. J. Med. Res. 10 1923.—*A. (S.) annandalei* var. n. *quadricincta* p. 227, *craggi* sp. n. fig. p. 227 India BARRAUD op. cit. 11 1923.—*A. (S.) chaussieri*, *masseyi* Belgian Congo and N.E. Rhodesia p. 397, EDWARDS Bull. Ent. Res. 13.

*Aëdimorphus* see *Aëdes*.

*Aniella* gen. n. type *Stegomyia africana* Theo. p. 26, *ziemannii* p. 27 Kamerun, *togoensis* p. 28 E. Africa, Togo spp. n., ENDERLEIN Wiener Ent. Ztg. 40.

*Anopheles* key to N. American larvae and adults p. 58, *walkeri* larva p. 61 fig., male p. 63, MATHESON & SHANNON Insec. Insc. Mens. 11.—*A.*, male genitalia of some American pp. 265–279 (fig.), Root Amer. J. Hyg. 3.—*A.*, key to Siamese p. 71, BARNEs J. Nat. Hist. Soc. Siam 6.—*A.*, keys to adults and larvae of Panama Canal species p. 32, ZETEK Proc. Med. Assoc. Isthm. Canal Zone 1920 13 1923.—*Anopheles maculipennis* oogenesis pp. 395–450, NICHOLSON Q. J. Micr. Sci. 65 1921.—*A. (Cellia) cuyabensis* sp. n. fig. Brazil p. 235, NEIVA & PINTO Brazil-Medico 37 (1).—*A. amazonicus* sp. n. S. America fig. p. 72, CHRISTOPHERS Ann. Trop. Med. and Parasit. 17.—*A. kingi* sp. n. figs. Kenya p. 1011, CHRISTOPHERS Ind. J. Med. Res. 10.—*A. algeriensis* p. 76, *sergenti* p. 78, larvae, Palestine, BUXTON Bull. Ent. Res. 14.—*A. tarsimaculatus* colour variations p. 127, BONNE Insec. Insc. Mens. 11.—*A. (Chagasia) farjardi* p. 112, (*A.*) *mediopunctatus* male hypopygium p. 115, *mediopunctatus* eggs p. 118 figs. BONNE Tijdschr. Ent. 66.—*A. atropos* D. & K. described, BEYER Amer. J. Trop. Med. 3 pp. 353–363 2 figs.—*A. bifurcatus* chaetotaxy of larva and pupa p. 519, differences between German spp. p. 534, MARTINI Zool. Jahrb., Syst., 46.

*Cellia* see *Anopheles*.

*Chagasia* see *Anopheles*.

*Christophersiomyia* gen. n. p. 786, key to adults, India p. 787, BARRAUD Ind. J. Med. Res. 10.

*Culex (Culiciomyia) macfieii* sp. n. Gold Coast p. 399, EDWARDS Bull. Ent. Res. 13.—*C. hackeri* p. 4 Malaya, *cataractarum* p. 7, (*Culiciomyia*) *muticus* p. 6 New Britain, spp. n., ID. op. cit. 14.—*C. (Choeroporpa) egcymon* Canal Zone p. 67, (*Culex*) *lepostenisi* Panama p. 70, spp. n., *mutator* D. & K. (= *alfaroi* Dyar) p. 119, *leprincei*, synonymy p. 119, (*Melanoconion*) *panocossa* sp. n. Panama p. 120; *cyanopennis* von Humboldt, *lineatus* v. H., *ferox* v. H. see *Psorophora*; *chloropterus* v. H. see *Sabothoides*;

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*Opifex fuscus*, bionomics, pp. 400–406, KIRK Trans. N. Z. Inst. 54.

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*Psychoda alternata, minuta*, life history and external structure p. 545, TURNER Amer. Nat. 57.

*Telmatoscopus similis* p. 171 fig. Holland, *apicealbus* p. 179 fig. Italy spp. n., TONNOIR Ann. Soc. ent. Belg. 62.

#### ORPHNEPHILIDAE.

*Orphnephila testacea* biology, p. 631 (figs.), SAUNDERS Ann. Mag. N. H. (9) 11.

#### PTYCHOPTERIDAE.

*Liriope handlirschi* sp. n. Moravia p. 13, catalogue, characters & key to Moravian spp., figs., CZIŽEK Zs. Mähr. Landesmuseums 17 1919.

#### TANYDERIDAE.

A preliminary revision of the Tanyderidae of New Zealand, EDWARDS Trans. N.Z. Inst. 54 pp. 265–352.

*Tanyderus oculatus* sp. n. New Guinea p. 143, RIEDEL Ann. Mus. Nat. Hung. 18, 1921.—*T. marginatus* sp. n. N.Z. p. 625, EDWARDS Ann. Mag. N. H. (9) 11.—*T. neptunus, varipes*, spp. n. fig. New Zealand p. 272, EDWARDS Trans. N. Z. Inst. 54.

#### ANISOPODIDAE (RHYPHIDAE).

A preliminary revision of the Anisopodidae of New Zealand, EDWARDS Trans. N. Z. Inst. 54 pp. 265–352.

*Anisopus fenestralis* var. n. *withycombei* p. 476, zetterstedti England, *limpidus* Austria p. 478, *foreatus* Ceylon p. 479, *malayensis* Malaya p. 480, *javanicus* Java p. 481, *indivisus*, *separatus* Himalayas p. 482, *ornatus* p. 483, *pauperatus* Venezuela p. 485, *marmoratus* Colombia p. 484, *annuliferus* Brazil p. 485, *tibialis* Mexico p. 486, *albicornis* Jamaica, *luteatus* Br. Guiana p. 487 spp. n., *undulatus* Lamb distinct from *notatus* Hutton p. 483, *marginatus* Say distinct from *punctatus* p. 488 figs., EDWARDS Ann. Mag. N. H. (9) 12.

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#### TRICHOCERIDAE.

*Paracladura* Brun. not a synonym of *Trichocera*, New Zealand species referred to p. 491, EDWARDS Ann. Mag. N. H. (9) 12.

*Trichocera*, New Zealand species referred to *Paracladura, antarctica* sp. n. Campbell Is. p. 492, EDWARDS Ann. Mag. N. H. (9) 12.—*T. howesi* p. 73, *lyrifera* p. 74 spp. n. New Zealand, ALEXANDER Insec. Ins. Mens. 11.—*T. flavoides* sp. n. Formosa p. 467, ALEXANDER Philipp. J. Sci. 12.

**TIPULIDAE (including LIMNOBIIDAE).**

A preliminary revision of the Tipulidae of New Zealand, EDWARDS Trans. N. Z. Inst. 54 pp. 265–352.

Cylindrotomidae, a distinct family, metamorphosis, p. 113, LENZ Arch. Naturg. 85 A 6 1920.

*Adelphomyia faurei* sp. n. Natal p. 382, ALEXANDER Rev. zool. afr. 11.

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*Cryptolabis (Procryptolabis subgen. n. p. 183) argentinensis* sp. n. Argentina p. 184, ALEXANDER Ent. News 34.

*Ctenacroscelis aberrans* sp. n. Queensland p. 108, ALEXANDER Proc. R. Soc. Queensl. 32 1920.

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*honestus* p. 181, *bruchi* p. 182 spp. n.  
 Argentina, ALEXANDER Ent. News 34.

*Nephrotoma graueri* p. 89, *monopsellia*  
 p. 91, *citreiceps* p. 92 Ethiopia spp. n.,  
 SPEISER Wiener ent. Ztg. 40.

*Nesopeza taiwania* sp. n. Japan p. 70, ALEXANDER Ann. Ent. Soc. Amer. 16.

*Orimarga karnyi, similis* spp. n. Java p. 181, EDWARDS Treubia 3.

*Orolimnophila eluta* sp. n. fig. N. Zealand p. 302, EDWARDS Trans. N. Z. Inst. 54.—*O. connexa* p. 198 sp. n., *eluta* subsp. n. *flavida* p. 199 New Zealand, ALEXANDER Ann. Mag. N. H. (9) 11.

*Phalacroceria formosae* sp. n. Formosa p. 479, ALEXANDER Philipp. J. Sci. 22.

*Phymatopsis brevipalpis* sp. n. Queensland p. 105, ALEXANDER Proc. R. Soc. Queensl. 32 1920.

*Prionota séguyi* sp. n. Java p. 131, ALEXANDER Insec. Insc. Mens. 11.

*Procryptolabis* subgen. n. see *Cryptolabis*.

*Pseliophora rubella* sp. n. Java p. 180, EDWARDS Treubia 3.—*P. gloria* p. 97, *harmandi* p. 98, *flavostigma* p. 99 French Indo-China spp. n., ALEXANDER Bull. Mus. Hist. nat. Paris 1923.—*P. vulcan* sp. n. Japan p. 71, ALEXANDER Ann. Ent. Soc. Amer. 16.—*P. igorota* sp. n. Luzon p. 480, ALEXANDER Philipp. J. Sci. 22.—*P. kershawi* sp. n. China p. 257, ALEXANDER Proc. Hawaiian Ent. Soc. 1922 5.

*Rhabdomastix (Sacandaga) optata* p. 104, *vittithorax* p. 105, *trichiata* p. 197, *callosa* p. 198, New Zealand spp. n., ALEXANDER Ann. Mag. N. H. (9) 11.

*Rhamphidia harrisi* sp. n. New Zealand p. 98, ALEXANDER Ann. Mag. N. H. (9) 11.

*Rhamphophila* gen. n. p. 302, genotype *Limnophila obscuripennis* Huds., *lyrifera* sp. n. fig. p. 304 N. Zealand, EDWARDS Trans. N. Z. Inst. 54.

*Raphidolabis consors* sp. n. Japan p. 68, ALEXANDER Ann. Ent. Soc. Amer. 16.

*Rhipidia plurinervis* sp. n. New Guinea p. 132 fig., RIEDEL Ann. Mus. Nat. Hung. 18 1921.—*R. rostrifera* subsp. n. *formosana* Japan p. 61, ALEXANDER Ann. Ent. Soc. Amer. 16.

*Taiwanomyia* gen. n. p. 476 for *Taseocera fragilicornis* Riedel p. 477, ALEXANDER Philipp. J. Sci. 22.

*Taseocera fragilicornis* see *Taiwanomyia* gen. n.

*Teucholabis aberrans* sp. n. Japan p. 63, ALEXANDER Ann. Ent. Soc. Amer. 16.

*Thaumastoptera calceata*, metamorphosis, bionomics p. 114, LENZ Arch. Natg. 85 A 4 1920.

*Tipula oleracea* anatomy and ecology pp. 393–441 figs., BODENHEIMER Zs. wiss. Zool. 121.—*T. dentata* Meij. p. 141, *venusta* Wlk. p. 142 redescribed, figs., RIEDEL Ann. Mus. Nat. Hung. 18 1921.—*T. lateralis* group, synonymy, p. 119, GOETGHEBUER Bull. Soc. ent. Belg. 5.—*T. curvicauda* p. 72, *microcellula* p. 73, Japan spp. n., *edwardsella* n. n. for *T. flavicosta* Edw., ALEXANDER Ann. Ent. Soc. Amer. 16.—*T. barretoi* sp. n. Argentina p. 312, ALEXANDER Ent. News 34.—*T. whitleyi* p. 161, *pribilofensis* p. 163, *aleutica* p. 164, *alascaensis* p. 167, Pribilof Islands, spp. n. fig., ALEXANDER North Amer. Fauna 46.—*T. hypopygalis* China p. 101, *obliterata* Thibet p. 102 spp. n., ALEXANDER Bull. Mus. Hist. nat. Paris 1923.—*T. heterogama* see *Hudsonia*.

*Tipulodina nipponica* p. 74, *brunettiella*, *taiwanica* p. 75 Japan spp. n., ALEXANDER Ann. Ent. Soc. Amer. 16.—*T. micracantha* French Indo-China, *scimitar* Burma p. 100 spp. n., ALEXANDER Bull. Mus. Hist. nat. Paris 1923.

*Trentepohlia efflatouni* sp. n. Egypt p. 84, PIERRE Bull. Soc. R. ent. Egypte 1922.—*T. (T.) brevisector* sp. n. Dahomey p. 374, ALEXANDER Rev. zool. afr. 11.—*T. (T.) pulchripennis* p. 474, *T. (Mongoma) esakii* p. 475 spp. n. Formosa, ALEXANDER Philipp. J. Sci. 22.

*Tricyphona hannai* sp. n. Pribilof Islands p. 160 fig., ALEXANDER North Amer. Fauna 46.—*T. grandior* sp. n. Japan p. 69, ALEXANDER Ann. Ent. Soc. Amer. 16.—*T. symphyletes* sp. n. Formosa p. 479, ALEXANDER Philipp. J. Sci. 22.

*Ulomorpha nebulosa* p. 304, *fuscana* p. 305, spp. n. fig. N. Zealand, EDWARDS Trans. N. Z. Inst. 54.

*Xipholimnobia formosensis* sp. n. Formosa p. 473, ALEXANDER Philipp. J. Sci. 22.

*Zelandomyia* gen. n. *pygmaea* sp. n. New Zealand p. 106, ALEXANDER Ann. Mag. N. H. (9) 11.

## STRATIOMYIDAE.

Second revision of Oriental Stratiomyidae, BRUNETTI Rec. Ind. Mus. **25** pp. 45-180.

Metamorphosis of Stratiomyid larvae from wells, LENZ Arch. Natg. Abt. A **89** 1923 Heft 2 pp. 39-62 22 figs.

Phylogenetic relationship of genera of Pachygastrinae pp. 107-119, KERTÉSZ Allatt. Közlem. **15** 1916.

Revision of certain genera and species of Potamidiinae pp. 153-165, KERTÉSZ Ann. Mus. Nat. Hung. **18** 1921.

Key to genera of Adoxomyiini p. 96, KERTÉSZ Ann. Mus. Nat. Hung. **20**.

*Abasanistus* gen. n., *Cyclogaster rubriceps* Philippi p. 93 (fig.) (= ? *C. paulseni* Phil. ♂) referred to, *rubricornis* sp. n. p. 92 (fig.) Cordilleras, KERTÉSZ t.c.

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*Aadoxomyia* list of, and key to species p. 96, KERTÉSZ t.c.

*Argyrobithes insularis* sp. n. Waigou p. 167, *argenteus* ♀ described p. 168, KERTÉSZ Ann. Mus. Nat. Hung. **18** 1921.

*Cyclogaster rubriceps* Philippi see *Abasanistus*.

*Diapontiomya* gen. n. p. 116, *rufispina* sp. n. p. 118 fig. Australia, KERTÉSZ Ann. Mus. Nat. Hung. **20**.

*Dicorymbus* gen. n. type *Oxyicerca annulata* Beck. p. 175, KERTÉSZ Ann. Mus. Nat. Hung. **18** 1921.

*Ditylometopa* gen. n. near *Eryneura* p. 114, *elegans* sp. n. p. 115 fig. Peru, Brazil, KERTÉSZ Ann. Mus. Nat. Hung. **20**.

*Engonia* Brau. redescribed p. 157, KERTÉSZ Ann. Mus. Nat. Hung. **18** 1921.

*Epanastatis* gen. n. near *Hermione* Mg. p. 109, *fumipennis* sp. n. p. 111 fig. N. India, KERTÉSZ t.c.

*Epippium stylatum, igniferum*, spp. n. India p. 94, BRUNETTI Rev. Ind. Mus. **25**.

*Epiteicticus* gen. n. for *Nemotelus haemorrhous* Lw. p. 126, *imitator* sp. n. p. 128 (fig.) Cape Colony, KERTÉSZ Ann. Mus. Nat. Hung. **20**.

*Euclitellaria* gen. n., key to species p. 101, *brevispina* p. 102 Ispajran (Alai), *formosana* p. 103 fig. Formosa spp. n., KERTÉSZ t.c.

*Eudmeta diadematipennis* sp. n. Assam p. 108, BRUNETTI Rec. Ind. Mus. **25**.

*Evaza demeijeri* nom. n. for *pallipes* de Meij. (nec Big.) p. 79, BRUNETTI Rec. Ind. Mus. **25**.

*Geitonomyia* gen. n. near *Nemotelus Geoffr.* p. 122, *transsylvania* sp. n. p. 123 (fig.) Siebenburgen, KERTÉSZ Ann. Mus. Nat. Hung. **20**.

*Glaris* gen. n. near *Hermione* p. 107, *mexicana* sp. n. p. 108 fig. Mexico, KERTÉSZ t.c.

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*Hermetia borneensis* Sarawak p. 100, *malayana* Singapore p. 101, spp. n., BRUNETTI Rec. Ind. Mus. **25**.

*Metoponia rubriceps*, respiratory system p. 49 figs., IRWIN-SMITH Proc. Linn. Soc. N.S.W. **48**.

*Negritomyia* Big. redescribed p. 159, *ceylonica* sp. n. p. 163, synonymy p. 161 and key to species p. 164, KERTÉSZ Ann. Mus. Nat. Hung. **18** 1921.

*Nemotelus rufoabdominalis* sp. n. Mexico fig. p. 459, COLE Proc. Cat. Acad. Sci. (4) **12** 459.—*N.*, notes on, p. 127, *haemorrhous* Lw. referred to *Epiteicticus* gen. n. p. 126, KERTÉSZ Ann. Mus. Nat. Hung. **20**.

*Octarthria auricincta* sp. n. New Guinea p. 94 (fig.), KERTÉSZ t.c.

*Odontomyia varipes*, Lw. (= *alberta Curr.*) p. 150, CURRAN Canad. Ent. **55**.—*O. angustilimbata* p. 118, *notatifrons* Singapore p. 123, *punctifacies* p. 125, *fascipes* p. 129 Ceylon, *cohaerens* Mysol p. 131 spp. n., BRUNETTI Rec. Ind. Mus. **25**.

*Oxyicerca whitei* sp. n. Ceylon p. 89, BRUNETTI Rec. Ind. Mus. **25**.—*O. annulata* see *Dicorymbus*; *O. nigra* see *Vanoyea*.

*Parastratiomyia* gen. n. for *stratiomyioides* sp. n. Siam p. 67, BRUNETTI Rec. Ind. Mus. 25.

*Peritta* Beck. belongs to *Stratiomyinae* not *Odontomyinae* p. 170, KERTÉSZ Ann. Mus. Nat. Hung. 18 1921.

*Poropocera braunsi* sp. n. Cape Colony p. 88, KERTÉSZ Ann. Mus. Nat. Hung. 20.

*Potamida* Meig. redescribed p. 154, KERTÉSZ Ann. Mus. Nat. Hung. 18 1921.

*Pselaphomyia* gen. n. near *Lasiopa*, *picta* sp. n. Cape Colony p. 86, KERTÉSZ Ann. Mus. Nat. Hung. 20.

*Pseudowallacea* gen. n. p. 168, *hungarica* sp. n. Hungary p. 170, KERTÉSZ Ann. Mus. Nat. Hung. 18 1921.

*Piecticus assamensis* Assam p. 148, *connectens* Mysol p. 149 *latipennis* Burma p. 151 spp. n., BRUNETTI Rec. Ind. Mus. 25.

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*Stratiomyia approximata* n.n. for *barca* Brun. nec Walk. p. 115, *dissimilis* Upper Burma p. 116 sp. n., BRUNETTI Rec. Ind. Mus. 25.—*S. griseata* n. n. for *velutina* Curran, p. 74, CURRAN Canad. Ent. 55.

*Strobiloceromyia barovskii* sp. n. Petrograd p. 2, PLESKE Ann. Mus. zool. Acad. Sci. Russ. 24.

*Syndipnomyia* gen. n. p. 170, *auricincta* sp. n. Queensland p. 172, fig., KERTÉSZ Ann. Mus. Nat. Hung. 18 1921.

*Vanoyea* Villen redescribed p. 173, *separata* n.n. for *Oxycerata nigra* Beck. (nec Macq.) p. 174, KERTÉSZ t.c.

*Vappo alexanderi* anatomy p. 319 (fig.), BLANCHARD Physis 6.

*Wallacea* key to allied genera and species p. 165, KERTÉSZ Ann. Mus. Nat. Hung. 18 1921.

*Xylomyia nigra* Sikkim p. 167, *nigriventris* Lower Burma p. 168, *inconspicua* Siam p. 171, *intermedia* W. Himalayas p. 173, *similis* Darjeeling p. 174 spp. n., BRUNETTI Rec. Ind. Mus. 25.—*X. macroscelis* sp. n. Ethiopia p. 94, SPEISER Wiener ent. Ztg. 40.

#### TABANIDAE.

Tabanidae of Staten Island and Long Island, N.Y., BEQUAERT & DAVIS Bull. Brooklyn Ent. Soc. 18 pp. 113-122.

Occurrence of Tabanidae in Swiss Alps p. 40, GALLI-VALERIO Centralbl. Bakt. 1 Abt. 90.

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*Anacimas* gen. n. for *Archiplatius limbellatus* p. 545, ENDERLEIN D. ent. Zs. 1923.

*Archiplatius fenestrata* see *Holcopsis*; *A. limbellatus* see *Anacimas*.

*Ateloza* gen. n. for *Tylostypina fulleborni* p. 545, ENDERLEIN D. ent. Zs. 1923.

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*Chrysops*, markings of palaeartic species pp. 119-134, 161, figs., SZILÁDY Allatt. Közlem. 17 1918.—*C.*, causes of coloration pp. 1-28, 43-44, ID. op. cit. 19 1920.—*C. sejunctus* Georgia pp. 101, 126, *binoculatus* Amur pp. 101, 105, *minor* Spain pp. 102, 119, figs., spp. n., *dissectus* var. n. *mongolicus* p. 109, *flavipes* var. n. *askhabadensis* p. 111, SZILÁDY Arch. Natg. 83 A 4 1919.—*C. guiterasi* sp. n. Cuba p. 401, BRUNETTI Bull. Ent. Res. 13.—*C. moerens* Walk. (= *aestuans* Wulp) p. 205, HINE Ohio Jl. Sci. 23.—*C. laniger* Lw. see *Ziemannia*; *C. longicornis* Macq. see *Kleineana*.

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*Hybosstraba* gen. n. for *Hybopelma guttiventris* p. 545, ENDERLEIN D. ent. Zs. 1923.

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*Scaptiella* gen. n. for *Corizoneura aperta* Lw. p. 544, ENDERLEIN D. ent. Zs. 1923.

*Silvius punctipennis* sp. n. Cuba p. 402, BRUNETTI Bull. Ent. Res. 13.

*Sipala* gen. n. for *Therioplectes acuminator* Lw. p. 545, ENDERLEIN D. ent. Zs. 1923.

*Straba* gen. n. for *Tabanus sudetica* Zell. p. 545, ENDERLEIN t.c.

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*Sziladya* gen. n. for *Atylotus gigas* Herbst p. 545, ENDERLEIN t.c.

*Tabanus conformis* nom. n. (= *confinis* Beck.) p. 681, FREY Nat. Unt. Sarekgeb. 4 1917.—*T. equalis* n. n. for *uniformis* Hine p. 205, HINE Ohio J. Sci. 23.—*T. gracilipalpis* p. 143, *sexfasciatus* p. 144, spp. n. Alaska, HINE Canad. Ent. 55.—*T. (Ochropus) seurati* sp. n. Algeria p. 298, SURCOUF Bull. Soc. ent. Fr. 1922.—*T. strophiatus* n. n. for *striatus* auct. India p. 196, SURCOUF Bull. Soc. ent. Fr. 1923.—*T. sudetica* Zell. see *Straba*.

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*Ziemannia* gen. n. for *Chrysops laniger* Loew p. 544, ENDERLEIN D. ent. Zs. 1923.

#### PANTOPHTHALMIDAE.

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Catalogue of species of Australian Asilidae of which earlier stages have been recorded p. 368, IRWIN-SMITH Proc. Linn. Soc. N.S.W. 48.

Biology, metamorphosis and distribution of Swedish Asilids pp. 1-317 (fig.), MELIN Zool. Bidrag 8.

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*Phellus piliferus* Hardy (= *glaucus* Hardy ♂) p. 175, HARDY Ann. Mag. N. H. 12.

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*Schildia* gen. n. *microthorax* sp. n. Costa Rica p. 4, ALDRICH t.c.

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*Lordotus carus* Cal. p. 366, *niger*  
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Acad. Nat. Sci. Phil. 75.

*Metacosmus nitidus* sp. n. California  
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*Systoechus exilipes* sp. n. E. Africa  
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Afrique Or. 6 1923.

*Villa*, supplement to key (in Ann.  
Mus. Nat. Budapest 14 1916 pp. 17-67)  
p. 382, BECKER Ann. hist.-nat. Mus.  
Nat. Hung. 15 1917.—*V. chromo-*  
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#### EMPIDAE.

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83 A 6 1919.—*R. longestylata* p. 682  
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FREY Nat. Unt. Sarekgeb. 4 1916.

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#### PHORIDAE.

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*Parastenophora alpestris, bartholomaei* spp. n. Germany p. 55, SCHMITZ Zool. Med. Leiden 6 1921.

*Pelidnophora* gen. n. (near *Aphiochaeta*), *schmitzi* sp. n. Brazil p. 741, BORGMEIER Vozes de Petropolis 17.

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*Pseudacteon borgmeieri* sp. n. Brazil p. 714, SCHMITZ Vozes de Petropolis 17.—*P. caudalis* sp. n. Brazil p. 848, BORGMEIER Vozes de Petropolis 17.

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*Trineurocephala* gen. n. for *Hypocera angustifrons* End. p. 57, SCHMITZ Jaarb. Nat. Hist. Genootschap 1920-1923.

*Trupheoneura octobris* sp. n. Germany, Holland p. 54, SCHMITZ Zool. Med. Leiden 6 1921.

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#### SYRPHIDAE.

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Relation of biological and taxonomic studies in Syrphidae, CURRAN 53rd Ann. Rept. Ent. Soc. Ontario 1922 pp. 30-33.

Remarks on the work of T. Becker on Syrphidae, HERVÉ-BAZIN Bull. Soc. ent. Fr. 1923 pp. 129-131.

Some Chilean Syrphidae pp. 446-447, PORTER Rev. chil. Hist. nat. 25.

Key to N. American genera of Syrphidae, p. 17, SHANNON Bull. Brooklyn Ent. Soc. 18.

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*Leucorona lucorum* var. n. *americana* Canada p. 38, CURRAN Can. Ent. 55.

*Lycastris austeni* sp. n. India p. 279, BRUNETTI Fauna Brit. India 3.

*Megaspis* Macq. (= *Phytomia* Guér.) p. 252, HERVÉ-BAZIN Bull. Mus. Hist. nat. Paris 1923.

*Melanostoma fallax* sp. n. Alberta p. 271, CURRAN Can. Ent. 55.

*Microdon contractus* p. 310, *conveniens* p. 311, *fulvopubescent* p. 313, *carbonarius*, *apiformis* p. 314, *bellus* p. 315, *squamipennis* p. 316 spp. n. India fig., BRUNETTI Fauna Brit. India 3.—*M. rugosus* subsp. n. *concolor* Kenya p. 349, BEZZI Voy. Alluaud et Jeannel Afrique Or. 6 1923.—*M.*, early stages fig. p. 19, COLE J. Ent. & Zool. 15.—*M. sudanus* sp. n. Sudan fig. p. 146, CURRAN Rev. zool. afr. 11.—*M.*, notes on British spp. p. 233, EDWARDS Ent. Mo. Mag. 59.—*M. megalogaster* larva and pupa described fig. pp. 140-141, GREENE Proc. Ent. Soc. Wash. 25.—*M. manni* sp. n. Bolivia p. 80, SHANNON Insec. Ins. Mens. 11.

*Milesia verticalis* p. 269, *decora* p. 274 spp. n. India, BRUNETTI Fauna Brit. India 3.—*M. brunnea* Laos, *brunettii* Laos, Himalayas spp. n. p. 26, HERVÉ-BAZIN Bull. Soc. ent. Fr. 1923.—*M. crabroniformis* habits, p. 260, SCOTT Ent. Mo. Mag. 59.

*Mixogaster vespiformis* see *Paramixogaster*.

*Myiolepta californica* sp. n. California p. 21, SHANNON Bull. Brooklyn Ent. Soc. 18.—*M. pretiosa* sp. n. Mississippi p. 295, HULL Ohio J. Sci. 23.

*Olbirosyrphus clarus* Laos, Tonkin, Java, sp. n. p. 25, HERVÉ-BAZIN Bull. Soc. ent. Fr. 1923.

*Paramixogaster* gen. n. for *Mixogaster vespiformis* p. 319 figs., BRUNETTI Fauna Brit. India 3.

*Phytomia* Guér. see *Megaspis* Macq.

*Pipizella nigritarsis* Idaho and Wyoming p. 341, *similis* Montana p. 342, spp. n., CURRAN Trans. Amer. Ent. Soc. 49.

*Platychirus varipes* sp. n. New England p. 65, CURRAN Occ. Papers Soc. Nat. Hist. Boston 5.—*P. nodosus* p. 272, *peltatooides* p. 274 spp. n. Canada, CURRAN Can. Ent. 55.

*Rhingia semicinerea* sp. n. India p. 134, BRUNETTI Fauna Brit. India 3.

*Salpingogaster nigriventris*, biology and morphology pp. 1-6, BRUCH Physiol. 7.

*Sericomyia* sexual dimorphism pp. 136-141, CURRAN Insec. Insc. Mens. 11.

*Somula marivirginiae* sp. n. N. Carolina p. 278, BRIMLEY Ent. News 34.

*Stenosyrphus* key to N. American p. 59, *nigrifacies* sp. n. Alberta p. 62, *mallochi* n. n. for *interruptus* Malloch p. 74, CURRAN Canad. Ent. 55.—*S. vittifacies* sp. n. New England p. 66, CURRAN Occ. Paprs. Soc. Nat. Hist. Boston 5.

*Syrphus griseocinctus* p. 77, *remotus* p. 78, *quinquevittatus* spp. n. India p. 81 figs., BRUNETTI Fauna Brit. India 3.—*S. hypoxanthus* sp. n. Kenya p. 343, BEZZI Voy. Alluaud et Jeannel Afrique Or. 6 1923.—*S. nitidicollis* Mg. (= *protritus*, O.S.) p. 150, CURRAN Canad. Ent. 55.—*S. beckeri* n. n. for *monticola* Becker p. 129, HERVÉ-BAZIN Bull. Soc. ent. Fr. 1923.

*Temnostoma nipigonensis* sp. n. Ontario p. 269, CURRAN Canad. Ent. 55.

*Volucella signata* sp. n. India p. 146, BRUNETTI Fauna Brit. India 3.—*V. inanoides* p. 256 figs., *plumataoides* p. 257 E. Asia spp. n., *tabanoides* Mot. (= *japonica* Big.) p. 259, *trifasciata* Wied. (= *nubeculosa* Big.) p. 318, HERVÉ-BAZIN Bull. Mus. Hist. nat. Paris 1923.—*V. nigra* sp. n. Florida p. 165 fig., GREENE Proc. Ent. Soc. Wash. 25.

*Xanthogramma bouvieri* Laos, Trichinopoly, Nilgiris sp. n. p. 26, HERVÉ-BAZIN Bull. Soc. ent. Fr. 1923.—*X. citrinum* sp. n. India p. 95 (fig.), BRUNETTI Fauna Brit. India 3.

*Xylota dimidiata* p. 232, *cupreiventris* p. 233, *nursei*, *carbonaria* p. 240, *penicillata* p. 242 India spp. n., BRUNETTI Fauna Brit. India 3.

#### CONOPIDAE.

Revision of Indian Conopidae pp. 340–383 (figs.), BRUNETTI Fauna Brit. India, Dipt. 3.

Catalogue of Conopidae, with descriptions of genera, keys to genera and species, and synonymy, KRÖBER Arch. Natg. 83 A 8 pp. 1–91, 83 A 9 pp. 1–52 1919.

*Abrachyglossum* subgen. n. for *Brahyglossum* *capitatum* Loew p. 142, KRÖBER t.c.

*Aconops* gen. n. for *Conops longistylus* Kröber and *C. antennatus* Kröber p. 142, KRÖBER t.c.

*Conops claripennis* p. 345, *nigriventris* p. 346, *intermedius*, *rufofasciatus* p. 353 spp. n., *claripennis* var. n. *ceylonensis* p. 346 India, BRUNETTI Fauna Brit. India 3.

*Dacops* n. n. for *Pseudodacus* Kroeber (nec Hendel) p. 99, SPEISER Wiener ent. Ztg. 40.

*Microconops atricornis* sp. n. Queensland p. 143, KRÖBER Arch. Natg. 83 A 7 1919.

*Myopa nigriventris* sp. n. India p. 380, BRUNETTI Fauna Brit. India 3.

*Occemyia flavipes* sp. n. India p. 383, BRUNETTI t.c.

*Physocephala bicolor* p. 357, *aurantiaca* p. 358, *rufescens*, *nursei* p. 360, *argentifera* p. 361, *atricornis* p. 363, *diffusa* p. 365 spp. n. India (figs.), BRUNETTI t.c.

*Pleurocerinella* gen. n. *dioctriiformis* sp. n. India p. 368 fig., BRUNETTI t.c.

*Pseudodacus* Kroeber (nec Hendel) see *Dacops*.

*Stylogaster orientalis* sp. n. India p. 372 figs., BRUNETTI Fauna Brit. India 3.

*Zodion griseum* sp. n. India p. 375, BRUNETTI t.c.

#### OESTRIDAE.

Revision of Indian Oestridae pp. 383–405 figs., BRUNETTI Fauna Brit. India, Dipt. 3.

*Cephalopsis titillatar* biology p. 387 figs., SÉGUY Bull. Mus. Hist. nat. Paris 1923.

*Cobboldia loxodontis*, larval stages pp. 354–362 fig., GEDOELST Ann. Parasit. hum. & comp. 1.

*Gasterophilus haemorrhoidalis* larva redescribed p. 270, *pseudo-haemorrhoidalis* sp. n. Africa p. 272 (fig.), GEDOELST t.c.

#### Muscidae Calyptratae.

Muscidae Testaceae of the Oriental Region pp. 294–314, key to genera p. 301, SENIOR-WHITE Spolia Zeylanica 12.

Characters for differentiating families of Muscoidea, pp. 57–58, MALLOCH Ent. News 34.

#### TACHINIDAE.

Notes on fissicorn Tachinidae, p. 647, key to genera p. 652 figs., BEZZI Proc. Linn. Soc. N. S. W. 48.

Observations on life-cycle of certain Australian blowflies, JOHNSTON & HARDY Proc. R. Soc. Queensland 35 1923 pp. 21–42.

Genera of Nearctic Calliphoridae and revision of Calliphorini, SHANNON Insec. Insc. Mens. 11 pp. 101–118.

Effects of the introduction of Tachinidae from Europe into America, THOMPSON Bull. Soc. zool. Fr. 48.

Descriptions of pupae of Bohemian Tachinidae, pp. 55–59 (fig.), VIMMER Bull. Sect. ent. Mus. Nat. Prague 1.

*Actia spoliata* p. 95, *chrysocera* p. 96 Seychelles spp. n. figs., BEZZI Parasitology 15.

*Allophora nigeriensis* p. 80, *multisetosa* p. 81 spp. n. Nigeria, VILLENEUVE Rev. zool. afr. 11.

*Alloprosopaea* gen. n. p. 89, *efflatouni* sp. n. Egypt p. 90, VILLENEUVE Bull. Soc. R. ent. Egypte 1922.

*Anacaetopsis vagans* sp. n. Oregon p. 54, ALDRICH Ent. News 34.

*Bengalia* key to Indian species p. 301, *hastativentris* p. 305, *bezzii* p. 306 Ceylon, *surcoufi* India p. 306, spp. n. figs., SENIOR-WHITE Spolia Zeylanica 12.

*Bogosiella* gen. n. p. 78, *pomeroyi* sp. n. Nigeria p. 79, VILLENEUVE Rev. zool. afr. 11.

*Booponus* gen. n. p. 141, *intonsus* sp. n. p. 142 Los Baños, ALDRICH; life-history, p. 146, WOODWORTH & ASHCRAFT Philipp. J. Sci. 22.

*Caiusa testacea* sp. n. fig. Ceylon p. 310, SENIOR-WHITE Spolia Zeylanica 12.—*C. nigronitens* sp. n. Singapore p. 38, SENIOR-WHITE Mem. Dept. Agric. India 8.

*Calliphora*, genotype *vomitoria*, p. 176, STILES Science 57.—*C. vomitoria* var. n. *nigribarba* U.S. p. 116, *morticia* sp. n. Alaska p. 117, SHANNON Insec. Insc. Mens. 11.

*Campbellia* gen. n. p. 432, key p. 433, *campbelli* p. 433, *cockaynei* p. 436 spp. n. fig. N. Zealand, MILLER Trans. N. Z. Inst. 54.

*Centeter* gen. n. (nr. *Admontia*) p. 3, *cinerea* sp. n. Japan p. 4, ALDRICH Proc. U. S. Nat. Mus. 63 art. 6.

*Chaetophlepsis tarsalis* Tns. (= *Hypochaeta longicornis* Coq. nec Schin., *endryae* Smith) p. 161, ALDRICH Proc. Ent. Soc. Wash. 25.

*Cosmina indica* sp. n. fig. India p. 42, SENIOR-WHITE Mem. Dept. Agric. India 8.—*C. calida* sp. n. Seychelles p. 83, BEZZI Parasitology 15.

*Cryptocladocera* gen. n. p. 653, *prodigiosa* sp. n. S. America p. 655 fig., BEZZI Proc. Linn. Soc. N. S. W. 48.

*Dexopollenia hazarae* sp. n. India p. 51, SENIOR-WHITE Mem. Dept. Agric. India 8.

*Discochaeta liliputiana* sp. n. (fig.) Seychelles p. 94, BEZZI Parasitology 15.

*Epineura rubens* sp. n. Nigeria p. 78, VILLENEUVE Rev. zool. afr. 11.

*Euidiella termitophila* sp. n. Upper Burma p. 45, SENIOR-WHITE Mem. Dept. Agric. India 8.

*Exogaster hemimelaena* sp. n. fig. Seychelles p. 92, BEZZI Parasitology 15.

*Exorista nemorilloides* sp. n. Seychelles p. 101, BEZZI Parasitology 15.

*Ginglimyia bicolor* sp. n. Br. Columbia p. 246, CURRAN Canad. Ent. 55.

*Gynandromyia* gen. n. p. 97, *seychellensis* sp. n. p. 98 Seychelles, BEZZI Parasitology 15.

*Hoplocephala* (*Hoplocephaloea* subgen. n.) *nitidigena* sp. n. Egypt p. 94, VILLENEUVE Bull. Soc. R. ent. Egypte 1922.

*Hoplocephaloea* subgen. n. see *Hoplocephala*.

*Hypochoaeta longicornis*, *endryae* see *Chaetophlepsis tarsalis*.

*Idiopsis argenticincta* sp. n. India p. 48, SENIOR-WHITE Mem. Dept. Agric. India 8.

*Lucilia inventrix* Wlk. see *Pyrellina* (Muscidae).

*Metachaeta cinerosa* sp. n. Texas p. 268, REINHARD Ent. News 34.

*Metallea nigrofemorata* sp. n. Ceylon p. 46, SENIOR-WHITE Mem. Dept. Agric. India 8.

*Nitellia khasiensis* sp. n. India p. 49, SENIOR-WHITE Mem. Dept. Agric. India 8.

*Ochromeigenia* Towns. redescribed pp. 1-3, ALDRICH Proc. U. S. Nat. Mus. 63 art. 6.

*Paradexodes epilachnae* sp. n. Mexico p. 95, ALDRICH Proc. Ent. Soc. Wash. 25.

*Paradichosia* gen. n. (nr. *Paratrichyclea*) p. 311, *scutellata* sp. n. fig. p. 312 Darjiling, SENIOR-WHITE Spolia Zeylanica 12.

*Parasetigena porteri* sp. n. Chile p. 12 fig., BRÈTHES An. Zool. aplic. 7 1920.

*Paratacta* gen. n. *facialis* sp. n.  
Texas p. 266, REINHARD Ent. News 34.

*Paratricyclea* *asiatica* sp. n. India p. 38, SENIOR-WHITE Mem. Dept. Agric. India 8.

*Phytorophaga* gen. n. (near *Chaetophleps*) p. 411, *ventralis* sp. n. p. 412, Jawa, BEZZI Treubia 3.

*Pollenia* *indica* sp. n. (fig.) India p. 51, SENIOR-WHITE Mem. Dept. Agric. India 8.

*Sarcophaga*, larval characters p. 227, figs., ROOT J. Parasit. 9.—*S. shermani* p. 124 N. America, *ceylonensis* p. 125 Ceylon, India, Malaya, craggi p. 126 India, Nyasaland, Liberia, *marshalli* p. 126 Europe, *hutsoni* p. 127 Ceylon, S. India, spp. n. figs., PARKER Ann. Mag. N. H. (9) 11.—*S.*, revision of Australian spp., keys & synonymy, p. 94, *kohla* p. 113, *synia* spp. n. p. 127 (figs.), JOHNSTON & HARDY Proc. Linn. Soc. N. S. W. 48.—*S.*, key to Mascarene species, p. 85, *metallescens* p. 86, *spilargyra* p. 87, *pyrrhopoda* p. 89, Seychelles spp. n. figs., BEZZI Parasitology 15.

*Schizotachina*, key to spp., *fergusoni* sp. n. Sydney p. 657 fig., BEZZI Proc. Linn. Soc. N. S. W. 48.

*Senotainia trilineata*, oviposition, p. 174, CURRAN Canad. Ent. 55.

*Setulia immunita* sp. n. Egypt p. 93, VILLENEUVE Bull. Soc. R. ent. Egypte 1922.

*Sterigomyia aldrichia*, *alaskensis* spp. n. Alaska to Colorado, p. 112, SHANNON Insec. Insc. Mens. 11.

*Syntomogaster*, *Xanthosyntomogaster* subgen. n. p. 28, *ornata* p. 24, *turanica* p. 26, spp. n. Turkestan, ROHDENDORF Zool. Anz. 57.

*Tachinosalia* gen. n. p. 90, *aegyptiaca* sp. n. p. 91 Egypt, VILLENEUVE Bull. Soc. R. ent. Egypte 1922.

*Tritochaeta apicalis* sp. n. Egypt p. 92, VILLENEUVE Bull. Soc. R. ent. Egypte 1922.

*Xanthosyntomogaster* subgen. n. see *Syntomogaster*.

*Xiphomyia texana* sp. n. Texas p. 267, REINHARD Ent. News 34.

MUSCIDIÆ (*sens. strict.*),  
ANTHOMYIIDÆ.

Anthomyiidae of France, keys, descriptions, SÉGUY Faune de France 6. Paris 1923, 393 pp. 813 figs.

Revision of N. American Anthomyiidae pp. 1–106, STEIN Arch. Natg. 84 A 8 1920.

*Acanthoneura* gen. n. (Anthomyiidae) pp. 96–141, STEIN Arch. Natg. 83 A 1 1919.

*Acanthoneura* Stein (nec Macq.) see *Syllimnophora*.

*Alloeostylus* see *Phaonia*.

*Allognota nova* see *Tenuicosta*.

*Anaclysta* gen. n. (Anthomyiidae), type *multipunctata* Stein, pp. 90, 138, STEIN Arch. Natg. 83 A 1 1919.—*A. ruficornis*, *obliterata* spp. n. Australia p. 602, MALLOCH Proc. Linn. Soc. N. S. W. 48.

*Aphanoneura* gen. n. (Anthomyiidae) type *Coenosia echinata* Stein pp. 95, 140, STEIN Arch. Natg. 83 A 1 1919.

*Atherigona setifemur* Gold Coast p. 178, *pallidipes*, *distincta* p. 179 S. India, *tuberculata* p. 180, *aberrans* p. 181 Congo, *longipalpis* Guam p. 182, *pallidipalpis* Java p. 183, *hendersoni* Henderson Is. p. 184, *destructor* p. 185, *nudisetis* S. India p. 186, *addita* p. 189, *grisea* p. 190, *minor* Rodrigues Is., *tridentata* Kenya p. 191, *indica* S. India spp. n. p. 193, MALLOCH Ann. Mag. N. H. (9) 12.

*Australophyra* gen. n. for *Ophyra analis* Macq. p. 667, MALLOCH Ann. Mag. N. H. (9) 11.

*Azelia aequa* sp. n. N. America p. 46, STEIN Arch. Natg. 84 A 9 1920.

*Caricea prominens* see *Pectiniseta*.

*Chelisia elegans* sp. n. N. America p. 62, STEIN t.c.

*Chirosia alpicola* sp. n. Col du Lautaret p. 91, VILLENEUVE Bull. Mus. Hist. nat. Paris 1923.

*Chortophila* key p. 85, *armata* p. 86, *dorsilinea* p. 87, *glabra*, *incrassata* p. 88, *latipalpis* p. 89, *nigroscutellata* p. 90, *vilis* p. 91 spp. n. N. America, STEIN Arch. Natg. 84 A 9 1920.—C.

*echinata* sp. n. fig. Paris p. 360, SÉGUY Ann. Soc. ent. Fr. 91.—*C. lactucaeformis* p. 92, *cribrata* p. 93 Col du Lautaret, *meridiana* Hungary p. 94, *provecta* Paris, *cacuminata* Vichy p. 95, spp. n., VILLENEUVE Bull. Mus. Hist. nat. Paris 1923.

*Coenosia ambigua* p. 55, *pseudocylindrus* p. 59, *villeneuvei* p. 62, spp. n. France, SÉGUY Faune de France 6.—*C. rufitibia* nom. n. for *tibialis* Stein p. 161, STEIN Arch. Natg. 83 A 1 1919.—*C. key* to spp. p. 93, *albibasis* p. 95, *argenticolor* p. 96, *longimaculata* p. 97, *nigrescens* p. 98, *nigricoxa*, *nudipes* p. 99, *pallida*, *pilosissima* p. 100, *rufibasis* p. 101, *simplex* p. 102, *strigifemur* p. 103 spp. n. N. America, STEIN Arch. Natg. 84 A 9 1920.—*C. echinata* see *Aphanoneura*, *abnormis* see *Microcalyptra*, *nigrohalterata* see *Oxytonocera*, *dorsalis* see *Spanochaeta*.

*Cyrtoneura cyanea* see *Trichomorellia*.

*Dasymorellia* gen. n. (Anthomyiidae), *trichops* sp. n. Peru p. 527, MALLOCH Ann. Mag. N. H. (9) 12.

*Dalyta pallida* p. 22, *rufitibia* p. 23 spp. n. N. America, STEIN Arch. Natg. 84 A 9 1920.

*Eremomyia* key to spp. p. 73, STEIN t.c.

*Eutrichota exomma* sp. n. Warsaw p. 365, SÉGUY Ann. Soc. ent. Fr. 91.

*Exsul tenuis* sp. n. N.Z. p. 674, MALLOCH Ann. Mag. N. H. (9) 11.

*Fannia flavitibia*, *fuscitibia* p. 72, *nigra* p. 43, spp. n. N. America, STEIN Arch. Natg. 84 A 9 1920.—*F. australis* sp. n. Australia p. 605, MALLOCH Proc. Linn. Soc. N. S. W. 48.

*Fucellia maritima* subsp. n. *pacifica* Mexico p. 427, MALLOCH Proc. Cal. Acad. Sci. 12.

*Glossina*, distribution in W. Africa p. 720 fig., ROUBAUD Ann. Inst. Pasteur 36 1922.—*G. palpalis fuscipes* Newst. (= *ziemannii* Grünb.) p. 533, NEWSTEAD Ann. Trop. Med. & Paras. 17.

*Helina australasiae* p. 669, *howei* Australia, *hirtibasis* p. 671 Australia & Tasmania, *vandiemeni* Tasmania spp. n.

p. 672, MALLOCH Ann. Mag. N. H. (9) 11.—*H. simulata* sp. n. N. S. Wales p. 603, MALLOCH Proc. Linn. Soc. N. S. W. 48.

*Herbebazinia* gen. n. (Anthomyiidae) p. 364, *longipes* sp. n. fig. France p. 364, SÉGUY Ann. Soc. ent. Fr. 91.

*Hydrotaea australis* Australia p. 667, *subilicosta* spp. n. Columbia p. 668, MALLOCH Ann. Mag. N. H. (9) 11.

*Hylemyia* key to spp. p. 74, *aniseta*, *lateralis* p. 77, *nigribasis* p. 78, *nigri thorax* p. 79, *pilimana*, *seriata*, *similis* p. 80, *ventralis* p. 81 spp. n. N. America, STEIN Arch. Natg. 84 A 9 1920.—*H. griseifrons* sp. n. fig. Pyrenees p. 361, SÉGUY Ann. Soc. ent. Fr. 91.—*H. flavisquama* sp. n. Pribilof Islands p. 193, MALLOCH N. Amer. Fauna 46.

*Hylephila argentea* sp. n. France p. 359, SÉGUY Ann. Soc. ent. Fr. 91.—*H. hessei*, *hirsuta* spp. n. France p. 75 (figs.), SÉGUY Faune de France 6.

*Limnophora* key to N. American p. 46, *fumosa* p. 48, *nigrifrons* p. 49, *nitidifrons*, *parvimaculata* p. 50, *rufitarsis* p. 51, *rufitibia* p. 52, *squamosa* p. 53, *subrostrata*, *umbrina* p. 54, *concolor* p. 55 spp. n. N. America, STEIN Arch. Natg. 84 A 9 1920.—*L. pandellei* sp. n. France p. 203, *erronea* n. n. (= *littorea* Pand.) p. 213, SÉGUY Faune de France 6.—*L. discreta* larva pp. 58–62, MARCHAND Bull. Brooklyn Ent. Soc. 18.

*Lispa*, key to Australian p. 606, *xenochaeta* sp. n., *pumila* synonymy p. 608, MALLOCH Proc. Linn. Soc. N. S. W. 48.

*Lispocephala australis* sp. n. Australia p. 604, MALLOCH t.c.

*Melanochelia immaculiventris* sp. n. Mexico p. 425, MALLOCH Proc. Cal. Acad. Sci. 12.—*M. tenuicornis* sp. n. N.Z. p. 673, MALLOCH Ann. Mag. N. H. (9) 11.

*Microcalyptra* gen. n. (Anthomyiidae) pp. 101, 157, type *Coenosia abnormis* Stein, STEIN Arch. Natg. 83 A 1 1919.

*Morellia*, keys to N. American, European and African, p. 520, S. American p. 523, MALLOCH Ann. Mag. N. H. (9) 12.

*Musca*, genotype *domestica*, p. 176, STILES Science 57.—*M.*, key to males of Philippine p. 320, *bakeri* sp. n. p. 316 Philippines, revised list of Oriental species, p. 327, *illingworthi* sp. n. p. 323 Buitenzorg, *dasyops* Stein male and female described p. 326, *yerburyi* n.n. for *incerta* Patton (nec Walker) p. 329, PATTON Philippine J. Sci. 23.—*M. albina*, *lucidula* males pp. 108–118, BEZZI Bull. Soc. R. ent. Egypte 1922.

*Muscina stabulans* notes on p. 310, *stabulans* and *assimilis* early stages p. 443 (figs.), SÉGUY Bull. Mus. Hist. nat. Paris 1923.

*Mydaea duplicata* intersex p. lxxx, COLLIN Proc. Ent. Soc. 1922.—*M. behningi* sp. n. S. Russia p. 72, ENDERLEIN Arb. Biol. Wolga-Sta. 7.—*M. pseudotetricans* sp. n. France p. 245, SÉGUY Faune de France 6.—*M.*, key p. 220, *flavidipalpis* sp. n. Maryland p. 221, MALLOCH Canad. Ent. 55.—*M.*, key to N. American p. 25, *aperta* p. 28, *astuta*, *biseriata* p. 29, *exilis* p. 30, *flavocalyptara* p. 31, *furtiva*, *humilis* p. 32, *impedita*, *nudiseta* p. 33, *otiosa* p. 34, *pulla* p. 35, *varia* p. 36 spp. n. N. America, STEIN Arch. Natg. 84 A 9 1920.—*M. nubila* for *obscura* Stein p. 122, *tricincta* for *tripunctata* Stein p. 125, nomm. n., STEIN Arch. Natg. 83 A 1 1919.

*Onychomyia* gen. n. (Anthomyiidae) pp. 100, 138, *approximatilervis* sp. n. Java p. 139, STEIN Arch. Natg. 83 A 1 1919.

*Ophyra* key, p. 664, MALLOCH Ann. Mag. N. H. (9) 11.—*O. analis* see *Australophyra*.

*Orthellia latifrons* Natal p. 508, *siamensis* Siam p. 509, *aureopyga* p. 510, *ruberifacies*, *dubia* B.E.A. p. 511, *abnormis* Natal p. 512, *claripennis* India, *semilutea* Java spp. n., key p. 515, MALLOCH Ann. Mag. N. H. (9) 12.

*Oxytonocera* gen. n. p. 94 (*Oxytonocera* sic p. 139) (Anthomyiidae), type *Coenosia nigrohalterata* Stein, STEIN Arch. Natg. 83 A 1 1919.

*Parahydrotaea* gen. n. (Anthomyiidae), *jacobsoni* sp. n. Java pp. 90, 129, STEIN t.c.

*Pectiniseta* gen. n. (Anthomyiidae) type *Caricea prominens* Stein pp. 96, 145, STEIN t.c.

*Pegomyia* key p. 63, *abnormis* p. 65, *anorufa*, *cognata* p. 67, *connexa* p. 68, *fuscinervis* p. 69, *setigera* p. 70, *striata* p. 71 spp. n. N. America, STEIN Arch. Natg. 84 A 9 1920.—*P. indigena* sp. n. Hautes-Alpes p. 91, VILLENEUVE Bull. Mus. Hist. nat. Paris 1923.—*P. polygoni* sp. n. Canada p. 221, SEAMANS Canad. Ent. 55.

*Phaonia* key to and notes on Swedish species pp. 117–140, *ostrogotica* sp. n. p. 132 Sweden, RINGDAHL Ent. Tidskr. 44.—*P. crassa* sp. n. fig. Austria p. 367, SÉGUY Ann. Soc. ent. Fr. 91.—*P.* key to N. American p. 1, *apta*, *caesia* p. 4, *dulcis* p. 5, *flava* p. 6, *fuscinervis* p. 7, *inculta* p. 8, (*Alloeostylus*) *infesta* p. 9, (*A.*) *inepta* p. 10, *nervosa*, *pallicornis* p. 12, *perfida* p. 13, *prisca*, *quieta* p. 14, *solitaria* p. 15, *versicolor* p. 16, spp. n. N. America, STEIN Arch. Natg. 84 A 9 1920.—*P. armipes* p. 327, *subvittata* p. 336, spp. n. (figs.) France, SÉGUY Faune de France 6.

*Philornis* key p. 308, ALDRICH Ann. Ent. Soc. Amer. 16.

*Phyllogaster inermis* p. 58, *maxima* p. 59 spp. n. N. America, STEIN Arch. Natg. 84 A 9 1920.—*P. longispina* sp. n. Mexico p. 426, MALLOCH Proc. Cal. Acad. Sci. 12.

*Pogonomyia flavipennis* p. 21, *unicolor* p. 22 spp. n. N. America, STEIN Arch. Natg. 84 A 9 1920.

*Pseudocoenosia uralica* sp. n. N. America p. 60, STEIN t.c.

*Pyrellia* key p. 515, MALLOCH Ann. Mag. N. H. (9) 12.

*Pyrellina* gen. n. (Muscidae) type *Lucilia inventrix* Wlk. p. 525, *unicolor* Gold Coast, *ruficauda* Kenya spp. n. p. 526, MALLOCH Ann. Mag. H. N. (9) 12.

*Rhabdotoptera* gen. n. (Anthomyiidae) pp. 95, 155, type *Schoenomyza striatipennis* Stein, STEIN Arch. Natg. 83 A 1 1919.

*Schoenomyza flaviceps* sp. n. N. America p. 105, STEIN Arch. Natg. 84 A 9, 1920.—*S. striatipennis* see *Rhabdotoptera*.

*Spanochaeta* gen. n. (Anthomyiidae) pp. 95, 157, type *Coenosia dorsalis* v. Ros, STEIN Arch. Natg. 83 A 1 1919.

*Stomoxys*, key to Hungarian pp. 51-58, 92, SZILÁDY Allatt. Közlem. 20 1921.—*S. calcitrans*, biology, SURCOUF Bull. Mus. Hist. nat. 1923.

*Syllimnophora* n. n. for *Acanthoneura* Stein nec Macquart p. 99, SPEISER Wiener ent. Ztg. 40.

*Taeniomyia* gen. n. (Anthomyiidae) pp. 99, 150, STEIN Arch. Natg. 83 A 1 1919.

*Tenuicosta* gen. n. (Anthomyiidae) pp. 100, 156, type *Allognota nova* Stein, STEIN t.c.

*Tetramerinx parvimaculata* sp. n. N. America p. 60, STEIN Arch. Natg. 84 A 9 1920.

*Trichomorellia* gen. n. (Anthomyiidae), type *Cyrtoneura cyanea* Macq., pp. 89, 109, STEIN Arch. Natg. 83 A 1 1919.

*Trichopticus curvipes, medius* spp. n. N. America p. 19, STEIN Arch. Natg. 84 A 9 1920.

*Xenolispa*, key to Australian p. 609, *sydneyensis* Schin. (= *atrifrontata* Mall.), *albimacula* p. 610, *nigrimana* spp. n. Australia p. 611, MALLOCH Proc. Linn. Soc. N. S. W. 48.

*Xenomorellia* gen. n. (Anthomyiidae) p. 524, *holti* sp. n. Peru p. 525, MALLOCH Ann. Mag. N. H. (9) 12.

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*Allomyella* n. n. for *Allomyia* (Scatophagidae), *brevipennis* sp. n. Pribilof Islands p. 199, MALLOCH N. Amer. Fauna 46.

*Allomyia* see *Allomyella*.

*Americina* gen. n. (Cordyluridae) for *Paralleloma adusta* Loew p. 139, MALLOCH Ent. News 34.

*Cordylura beringensis* sp. n. Pribilof Islands p. 198, MALLOCH N. Amer. Fauna 46.

*Paralleloma* and allied genera pp. 139-140, 175-180, key p. 175, *tarsalis* p. 177, *similata* p. 178, *emarginata* p. 179, (with var. n. *dorsalis*), *banksi*, *deceptiva* p. 180 N. America spp. n., MALLOCH Ent. News 34.—*P. paridis* sp. n. Berlin p. 200, HERING D. ent. Zs. 1923.

*Scatophaga*, key p. 201, MALLOCH N. Amer. Fauna 46.—*S. pictipennis* sp. n. Gastein, p. 307, OLDEMBERG D. ent. Zs. 1923.—*S. stercoraria* habits pp. 167-168, RABAUD Bull. Soc. ent. Fr. 1923.

*Sciomyzoptera* see *Tapeigaster*.

*Tapeigaster* Macq. (= *Sciomyzoptera* Hendel) key p. 73, *marginifrons* p. 74, *luteipennis* p. 76, *argyrosppila* p. 77, spp. n. Australia, BEZZI Austr. Zool. 3.

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*Coelopa*, key to N. American p. 214, MALLOCH N. Amer. Fauna 46.—*C. anomala* sp. n. Mexico p. 470, COLE Proc. Cal. Acad. Sci. (4) 12.

### BORBORIDAE.

Keys to genera and subgenera of N. American Borboridae, p. 372, SPULER Proc. Acad. Nat. Sci. Phil. 75.

*Achaetothorax* nom. n. for *Gymnothorax* Duda (nec Bloch & Schneider) p. 431, HEDICKE D. ent. Zs. 1923.

*Borborillus uncinatus* p. 77, *opacifrons*, *nitidifrons* p. 86, *hispanicus* p. 90 Europe, *niveipennis* N. Africa p. 89, *saliens* Timor p. 107 spp. n., DUDA Arch. Natg. Abt. A 89 Heft 4.

*Borborus*, revision of Old World species pp. 35-112, 14 figs, DUDA Arch. Natg. Abt. A 89 Heft 4.—*B. subapterus* sp. n. fig. Pribilof Islands, p. 211, MALLOCH Proc. N. Amer. Fauna 46.

*Dolichocera flavocincta* sp. n. E. Africa p. 102, DUDA Arch. Natg. Abt. A 89 Heft 4.—See *Dudaia*.

*Dudaia* nom. n. for *Dolichocera* Duda (nec Latr.) p. 431, HEDICKE D. ent. Zs. 1923.

*Gymnothorax abyssinica* Abyssinia p. 103, *clunicrus* E. Africa, Madagascar, Abyssinia p. 105 spp. n., DUDA Arch. Natg. Abt. A 89 Heft 4.—See *Achaetothorax*.

*Olinia* Duda see *Scatophora*.

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### HELOMYZIDAE.

*Anorostoma raca* sp. n. Manitoba p. 244, GARRETT Canad. Ent. 55.

## SCIOMYZIDAE.

Notes on the biology of Sciomyzidae, p. 101 (figs.), LUNDBECK Vidensk. Medd. 76.

Sciomyzidae of the District of Columbia pp. 232-234, MALLOCH & MCATEE Ent. News 34 1923.

Catalogue of Hungarian Sciomyzidae, keys, morphology, figs., pp. 81-126, KERTÉSZ Allatt. Közlem. 14 1915.

*Ctenulus punctatus* sp. n. Denmark p. 106, LUNDBECK Vidensk. Medd. 76.

*Dryomyza hannai* see *Pseudosciomyza*.

*Limnia mehadiensis* Herculesbad p. 308, OLDENBERG D. ent. Zs. 1923.

*Pseudosciomyza* gen. n. for *Dryomyza hannai* p. 214, MALLOCH N. Amer. Fauna 46.

*Pteromicra canadensis* sp. n. Alberta p. 277, CURRAN Can. Ent. 55.

*Tapeigaster* Macq. transferred to Scatophagidae (q.v.).

## SAPROMYZIDAE

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*Camptoprosopella maculipennis* sp. n. Arizona p. 47, MALLOCH Proc. Ent. Soc. Wash. 25.

*Cestrotus elegans* Abyssinia, Morocco p. 78, *argenteus* Abyssinia p. 79, spp. n., HENDEL Verh. zool.-bot. Ges. Wien 70 1920.

*Deceia*, gen. n. for *Sapromyza crevecoeurii* Coq., *wetmorei* sp. n. Florida p. 49, *Melanomyza* subgen. n. for *Lauxania gracilipes* Lw., *incongrua*, *intermedia* p. 50, *scutella* p. 51 U.S.A. spp. n., *Trivitalia* subgen. n., *fuscocapitata* sp. n. p. 53, Virginia, MALLOCH Proc. Ent. Soc. Wash. 25.

*Eusapromyza* gen. n. for *Sapromyza multipunctata* Fallen (European) p. 51, MALLOCH Proc. Ent. Soc. Wash. 25.

*Lauxania muscaria* Lw., see *Xenochaetina*.—*L. gracilipes* see *Deceia*.

*Melanomyza* subgen. n. see *Deceia*.

*Minettia americana* sp. n. Maryland p. 53, MALLOCH Proc. Ent. Soc. Wash. 25.

*Sapromyza serrata* male described, *obtusilamellata*, *pictiventris* p. 52, *fasciventris* p. 53, spp. n. N. America, MALLOCH Proc. Ent. Soc. Wash. 25.—*S. multipunctata* see *Eusapromyza*.—*S. crevecoeurii* see *Deceia*.

*Sapromyzosoma* gen. n. for *citreifrons* Mall. p. 51, MALLOCH Proc. Ent. Soc. Wash. 25.

*Trigonometopus*, key to, *immaculipennis* sp. n. Cuba p. 48, MALLOCH Proc. Ent. Soc. Wash. 25.

*Trivialia* subgen. n. see *Deceia*.

*Turriger apicalis* Formosa p. 75, *pilosus* E. Africa p. 76, spp. n., HENDEL Verh. zool.-bot. Ges. Wien 70 1920.

*Xenochaetina* gen. n. for *Lauxania muscaria* Lw., *pallida* Nicaragua, *crassimana* Venezuela p. 49, spp. n., key, MALLOCH Proc. Ent. Soc. Wash. 25.

## LONCHAEIDAE.

*Lamprolonchaea rugosifrons* sp. n. Australia p. 183, BEZZI Austr. Zool. 3.

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*Sphyroperiscelis* gen. n. p. 1, *wheeleri* sp. n. Massachusetts p. 2 figs., STURTEVANT Amer. Mus. Novit. 76.

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*Acrosticta tepocae* p. 475, *mexicana* p. 476 spp. n. Mexico figs., COLE Proc. Cal. Acad. Sci. (4) 12.

*Melieria fasciata* synonymy pp. 182-184, BRÈTHES Rev. Chil. Hist. nat. 27.

*Notogramma purpurata* sp. n. Mexico p. 474, COLE Proc. Cal. Acad. Sci. (4) 12.

*Plagiocephalus huberi* sp. n. Nicaragua p. 259, CRESSION Ent. News 34.

## TRYPETIDAE.

Revision of N. American Trypetidae p. 119 figs., PHILLIPS J. N. Y. Ent. Soc. 31.

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*Baryplegma maculipennis* sp. n. Mexico fig. p. 473, COLE Proc. Cal. Acad. Sci. (4) 12.

*Carpophthoromyia angusticeps* sp. n. Central Africa p. 525, BEZZI Bull. Mus. Hist. nat., Paris 1923.

*Eucosmoptera* subgen. n. see *Aciura*.

*Eurosta pallida* sp. n. Mexico fig. p. 472, COLE Proc. Cal. Acad. Sci. (4) 12.—*E. solidaginis* varr. n. *fascipennis*, *subfasciatus* Canada p. 302, CURRAN Ent. News 34.

*Eutreta xanthochaeta* sp. n. Hawaii p. 261, ALDRICH Proc. Hawaiian Ent. Soc. 1922 5.

*Hermannloewia mutila* sp. n. Mozambique p. 580, BEZZI Bull. Mus. Hist. nat. Paris 1923.

*Hoplandromyia* gen. n. p. 577, *tetracera* sp. n. p. 578 Réunion, BEZZI t.c.

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*Spilographa* key, *wiedemanni* sp. n. p. 397, *zoë* var. n. *artemisicola* p. 398 Europe, HENDEL D. ent. Zs. 1923.

*Themara fallacivena* var. n. *trispila* W. Africa p. 577, BEZZI Bull. Mus. Hist. nat. Paris 1923.

*Trypaneaa dacetoptera* sp. n. New York p. 148 fig., PHILLIPS J. N.Y. Ent. Soc. 31.

*Urophora*, key to American p. 3, *townsendi* sp. n. Peru p. 4 fig., BEZZI Trans. Amer. Ent. Soc. 49.

*Xanthomyia* gen. n. type *platyptera* Lw. U.S.A. p. 140, PHILLIPS J. N. Y. Ent. Soc. 31.

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*Cliobata* gen. n. (Calobatinae) type *guttipennis* Wied. Brazil p. 540, ENDERLEIN D. ent. Zs. 1923.

*Micropeza flaviventris* sp. n. Mexico fig. p. 477, COLE Proc. Cal. Acad. Sci. (4) 12.

*Platychirella* n. n. for *Platychiria* End. (nec Schaeffer) p. 72, HEDICKE D. ent. Zs. 1923.

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*Scipopus guttulipennis* sp. n. Brazil p. 541, ENDERLEIN D. ent. Zs. 1923.

## CHLOROPIDAE.

Philippine Chloropidae pp. 71–83, 97–112, FREY Not. ent. 3.

*Cetema subvittata* Loew (= *hypocera* Becker), MALLOCH Bull. Brooklyn Ent. Soc. 18.

*Chalcidomyia gigas* sp. n. Philippines p. 82, FREY Not. ent. 3.

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*Chromatopterum*, key to Philippine p. 80, *ambiguum*, *amabile* p. 81 Philippines spp. n., FREY Not. ent. 3.

*Ectecephala tripunctata* sp. n. Costa Rica p. 22, ALDRICH Bull. Brooklyn Ent. Soc. 18.

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*Eurina brevifrons* sp. n. Berlin p. 310, OLDENBERG D. ent. Zs. 1923.

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*Meromyza lineola* sp. n. N. W. Canada  
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*Myrmecosepsis* gen. n. p. 244, *hystrix*  
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Ann. Mus. Natnl. Hung. 12 1914.

*Ops* Becker (nec Niceville) see  
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Islands p. 221, MALOCH N. Amer. Fauna  
46.—*S. lutosa* var. n. *nigripes* Hercules-  
bad p. 315, OLDENBERG D. ent. Zs.  
1923.

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*Balioptera combinata* larval anatomy,  
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1923.

#### AGROMYZIDAE.

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p. 467, *umbrinella* p. 469, *flavolateralis*  
p. 471, *flavocentralis* p. 474, *umbrosa*  
p. 476, *citreifemorata* p. 478, *flavopleura*  
p. 481 spp. n., *flavopleura* var. n. *casta*  
p. 482, New Zealand figs., WATT Trans.  
N. Z. Inst. 54.—*A. lathyri* sp. n. Berlin  
p. 394, HENDEL D. ent. Zs. 1923.—  
*A. lantanae* further description p. 262,  
ALDRICH Proc. Hawaiian Ent. Soc. 1922  
5.

*Cerodonta xanthocera* sp. n. S. Russia  
p. 169, HENDEL Arch. Natg. 84 A 7  
1920.

*Dizygomyza* gen. n. (genotype *Agr.*  
*morosa* Meig.) p. 130, *semiposticata*,  
*morula* p. 131, *hirticeps* p. 132,  
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*biseta*, *approximata* p. 135, spp. n.  
Europe, *stroblii* n. n. for *obscuripennis*  
Strobl p. 138, HENDEL t.c.

*Domomyza bicaudata* p. 123, *ocellaris*,  
*lunulata* p. 124, spp. n. Europe, HENDEL  
t.c.

*Haplomyza atronitens*, *latigenis* spp. n.  
Europe p. 145, HENDEL t.c.

*Leucopis bellula* anatomy p. 322 (fig.),  
BLANCHARD Physis 6.

*Liriomyza angularis* p. 140, *latipalpis*  
p. 141, *wachtlii* p. 142, *xanthaspida*  
spp. n., *pectoralis* subsp. n. *nigrifrons*  
p. 144, Europe, HENDEL Arch. Natg. 84  
A 7 1920.

*Melanagromyza* gen. n. (genotype  
*Agr. aeneiventris* Fall.), *cunctata* N.  
Africa p. 126, *rostrata* p. 127, *sim-*  
*plicoides* p. 128, Europe, spp. n.,  
HENDEL t.c.

*Napomyza heringii* p. 149, *palpata*,  
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*Ophiomyia cornifera, penicillata* p. 129,  
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t.c.

*Phytagromyza* gen. n. (genotype *Agr. flavocingulata* Strobl) p. 145, *praescutellaris* p. 146, *spinicauda*, *zernyi* p. 147, *orphana* p. 148 *spp. n.* Europe, HENDEL t.c.

*Tethina spinulosa* sp. n. Mexico p. 478, COLE Proc. Cal. Acad. Sci. (4) 12.

#### PHYTOMYZIDAE.

*Phytomyza platensis* sp. n. Buenos Aires p. 154 fig., BRÈTHES Rev. Zool. agric. & appl. 22.—*P. aegopodii* p. 386, *thysselini*, *ramosa* p. 387, *pastinacae* p. 388, *cirsii* p. 390, *tanaceti* p. 391 Europe, *spp. n.*, HENDEL D. ent. Zs. 1923.—*P. hendeli* sp. n. Austria, p. 197 fig., HERING D. ent. Zs. 1923.—*P. clematadi* sp. n. New Zealand p. 484, WATT Trans. N. Z. Inst. 54.—*P. conyzae*, *pseudohellebori* p. 152, *pulchra*, *ochracea* p. 155, *dasyops* p. 156, *dorsata*, *fulgens* p. 157, *pauli-loewii* p. 158, *aconiti* p. 159, *solidaginis*, *campanulae*, *cineracea* p. 160, *alpestris*, *matricariae* p. 161, *heteroneura*, *gentianae* p. 163, *melanosoma*, *actaeae* p. 164, *scotina* p. 165, *melana*, *cineracea*, *grisescens*, *opaca* p. 166, *cinerea*, *evanescens* p. 167, *pubicornis*, *obscura* p. 168 *spp. n.*, *hellebori* subsp. n. *obscurata* pp. 153, 158, *affinis* subsp. n. *continua* p. 158 Europe, HENDEL Arch. Natg. 84 A 7 1920.

#### HIPPOBOSCIDAE, STREBLIDAE, NYCTERIBIIDAE.

Notes on the Dipterous Family Hippoboscidae key, pp. 75–79, ALDRICH Insec. Insc. Mens. 11.

Nycteribiidae and Streblidae from New Caledonia and Loyalty Isl. pp. 86–96, FALCOZ Nova Caledonia A Zool. 3 1.

*Ascodipteron* in Ceylon p. 206, SENIOR-WHITE Nature 112.

*Aspidoptera megastigma* larva fig. p. 54, FERRIS Parasitology 15.

*Braula coeca* postembryonic development p. 193 fig., ARNHART Zool. Anz. 56.

*Cyclopodia oxycephala* p. 93 figs., FALCOZ New Caledonia A Zool. 3 1.

*Hippobosca maculata* anatomy of larva & imago pp. 1–40, SCHUURMANS STEKHOVEN Buitenzorg. 1923.

*Nycteribia scotti* sp. n. E. Africa p. 543 figs., FALCOZ Arch. Zool. 61.—*N. sarasini* sp. n. New Caledonia, Loyalty Isl. p. 89 figs., FALCOZ Nova Caledonia A. Zool. 3 1.—*N. pedicularia* larva fig. p. 55, FERRIS Parasitology 15.

*Nycteribosca alluaudi* sp. n. E. Africa p. 532 figs., FALCOZ Arch. Zool. 61.—*N. surcoufi* p. 83, *rouxi* p. 85, *spp. n.* figs. New Caledonia, Loyalty Isl., FALCOZ Nova Caledonia A. Zool. 3 1.

*Ornithomyia strigilecula* sp. n. figs. Peru p. 57, FERRIS Parasitology 15.

*Penicillidia oceanica* p. 86 figs., New Caledonia, FALCOZ Arch. Zool. 3 1.

#### SIPHONAPTERA.

List of British Siphonaptera, with special reference to Northumberland & Durham pp. 181–198, BAGNALL Trans. N. H. Soc. North. & Durham 5 1921.

List of Siphonaptera of Cumberland, Westmoreland, Lancashire & Cheshire pp. 100–105, BRITTON Lancs. Chas. Nat. 13 1920.

Additions to the Catalogue of Swiss Siphonaptera, JORDAN & ROTHSCHILD Ectoparasites 1 pp. 287–289.

Further Records of Algerian Siphonaptera, JORDAN & ROTHSCHILD Ectoparasites 1 pp. 290–292.

The racial descent of fleas pp. 29–38, MARTINI & BURGARTH Centralbl. Bakt. 1 abt. 90.

*Actenopsylla* gen. n., *suavis* sp. n. fig. Mexico p. 309, JORDAN & ROTHSCHILD Ectoparasites 1.

*Agastopsylla* gen. n., *boxi* sp. n. fig. Argentina p. 316, JORDAN & ROTHSCHILD t.c.

*Ceratophyllus runatus* p. 298, *luculentus* p. 299, *hirticrus* p. 300, *spp. n.* fig. Transbaikalia, JORDAN & ROTHSCHILD t.c.

*Ctenophthalmus orphilus* Switzerland p. 288 fig., *olbius* Br. E. Africa p. 306 spp. n., JORDAN & ROTHSCHILD t.c.

*Ctenopsyllus ravalliensis* p. 2768, *bitterrootensis* p. 2771 Montana spp. n., DUNN & PARKER Pub. Health Repts. 38.

*Echidnophaga gallinacea* distribution, p. 119 fig., SEARLE Vict. Nat. 40.

*Hoplopsiellus exoticus* sp. n. fig. Panama p. 311, JORDAN & ROTHSCHILD t.c.

*Micropsylla* gen. n. *peromyscus* sp. n. Montana p. 2767, DUNN & PARKER Pub. Health Repts. 38.

*Nearctopsylla hygini* subsp. n. *laurentina* fig. N. Brunswick p. 315, JORDAN & ROTHSCHILD t.c.

*Neopsylla acanthina* sp. n. fig. Siberia p. 307, JORDAN & ROTHSCHILD t.c.—*N. hamiltoni* sp. n. Montana p. 2770, DUNN & PARKER Pub. Health Repts. 38.

*Odontopsylla spenceri* sp. n. Montana p. 2765, DUNN & PARKER t.c.

*Parapsyllus*, key to American p. 369, *onychius* p. 352, *ulus* p. 354, *budini* p. 356, *fortis* p. 359, *levipes* p. 364 Argentina, *amplus* p. 366 Chile & Argentina, *tantillus* p. 367, *bleptus* p. 368 Argentina, spp. n. fig., JORDAN & ROTHSCHILD Ectoparasites 1.

*Pulex porcinus* sp. n. fig. Texas p. 312, JORDAN & ROTHSCHILD t.c.

*Rhadinopsylla dahurica* Transbaikalia p. 308, *sectilis* Br. Columbia p. 314 spp. n. figs., JORDAN & ROTHSCHILD t.c.

*Rhopalopsyllus*, key p. 350, *cacicu* subsp. n. *saevus*, p. 325 Trinidad, *australis* subsp. n. *tupinus*, *tamoyus* p. 328, *klagesi* subsp. n. *samuelis*, p. 331; *axius*, p. 335, *byturus*, p. 337, *acodontis*, *steganus*, p. 338, *litargus*, *peronis* p. 340, *adelus* p. 343, *callens* p. 347, *subtilis* p. 348, S. America, spp. n. figs., JORDAN & ROTHSCHILD t.c.

*Sivalius sellatus* sp. n. fig. Uganda p. 304, JORDAN & ROTHSCHILD t.c.

*Xenopsylla caffer* S. Africa p. 293, *gratiosa* Canary Islands p. 294 spp. n. fig., JORDAN & ROTHSCHILD t.c.

## HEMIPTERA.

List of Hemiptera of the Alpine fauna of the Atlas Mts., BERGEVIN Bull. Soc. Sci. nat. Maroc 3 pp. 153–155.

Revision of Hemiptera of Connecticut, BRITTON & others Conn. N. H. Surv. Bull. 34 807 pp. 20 pls. 169 figs.

Biology of the British Hemiptera-Heteroptera, BUTLER London 1923 682 pp. 7 plates.

Hemiptera of Western Hungary pp. 182–199, HORVÁTH Ann. Mus. Nat. Hung. 20.

Swedish aquatic Hemiptera, LUND-BLAD Ent. Tidskr. 43 1922 pp. 139–170 44 pp. 57–106 figs.

Distribution of Hemiptera in the Gironde p. 88, LAMBERTIE Proc. Soc. linn. Bord. 75.

Catalogue of Hemiptera of Valencia pp. 1–18 (figs. for species described by Horváth), MORÓDER SALA An. Inst. gen. & téc. Valencia 7 1920 (Trab. Lab. Hist. nat. 6).

Characters separating Heteroptera from Homoptera p. 254, MUIR Ent. Mo. Mag. 59.

An ecological study of the Hemiptera of the Cranberry Lake Region, New York, OSBORN & DRAKE N. Y. State Coll. Forestry Tech. Pubn. 16 pp. 5–24 12 figs.

Aquatic Hemiptera, sex relations, oviposition and egg structure, POISSON Bull. biol. Fr. & Belg. 57 pp. 89–97 figs.

Hemiptera of Connecticut (Ochteridae to Reduviidae) revisions with keys, TORRE BUENO Conn. N. H. Surv. Bull. 34 pp. 391–421, 658–665, 674–692 1 pl. 30 figs.

Hemiptera (excl. Coccidae) taken by the Cal. Acad. Sci. Expedition to the Gulf of California 1921, VAN DUZEE Proc. Cal. Acad. Sci. 12 pp. 123–200.

## Heteroptera.

Preliminary report on the Hemiptera-Heteroptera of Porto Rico, BARBER Amer. Mus. Novit. no. 75 13 pp.

Hemiptera-Heteroptera of Northern and Central Russia general morphology and keys, BIANKI & KIRITCHENKO Practical Entomology 4 lxvii + 320 pp.

Heteroptera in the vicinity of Cranberry Lake, DRAKE N. Y. State Coll. For. Tech. Pubn. **16** pp. 54–86 1 pl. 36 figs.

The Hemiptera-Heteroptera of Frankfort-on-Main and the Main Basin pp. 329–503, figs., GULDE Abh. Senckenberg natf. Ges. **37** 1921.

Descriptive catalogue with keys and numerous figs. of Heteroptera of France (especially N.W. France) pp. 201–301, GUERIN & PÉNEAU Trav. sci. Univ. Rennes **13** 1915.

The waterbugs (Hemiptera) of the Douglas Lake Region, Michigan, with various keys, 23 pp., HUSSEY Occ. Paprs. Mus. Zool. Univ. Michigan no. **75** 1919.

Hemiptera-Heteroptera in Sweden in 1922 pp. 180–186, LINDBERG Ent. Tidskr. **44**.

Heteroptera of the Pribilof Islands, p. 145, MCATEE N. Amer. Fauna **46**.

Heteroptera of Connecticut, key to families, p. 383, Termatophylidae to Scutelleridae revised, PARSHLEY Conn. N. H. Surv. Bull. **34** pp. 665–674, 692–707, 737–783 1 pl. 50 figs.

Hemiptera-Heteroptera records from Nova Scotia, PARSHLEY Proc. Acad. Ent. Soc. **8** pp. 102–108.

Myrmecoid Heteroptera pp. 31–88, POPPIUS & BERGROTH Ann. Mus. Nat. Hung. **18** 1921.

#### CYDNIDAE.

*Cydnoides arizonensis* sp. n. Arizona p. 304, VAN DUZEE Ent. News **34**.

*Euryscytus diminutus* sp. n. California p. 305, VAN DUZEE t.c.

*Geotomus noctivagus* sp. n. Mexico p. 125, VAN DUZEE Proc. Cal. Acad. Sci. **12**.

#### PENTATOMIDAE.

Genital segments of female Pentatomidae p. 43, JEANNEL Bull. Soc. Hist. nat. Toulouse **48** 1921.

Oriental Pentatomidae collected by C. F. Baker pp. 180–182, LEHMANN Zool. Anz. Leipzig **57** 1923.

*Brochymena apiculata* sp. n. Mexico p. 126, VAN DUZEE Proc. Cal. Acad. Sci. **12**.

*Cantheconidea furcellata* habits pp. 361–368, SONAN Konchu Sekai **25** 1921.

*Cazira verrucosa*, habits pp. 361–368, SONAN t.c.

*Cyphostethus tristriatus* development p. 35, PÉNEAU Bull. Soc. Sci. nat. Nantes (4) **1** 1921.

*Cyrtocoris simplex* p. 149 Brazil, *montanus*, *andicola* p. 150 Peru spp. n. figs., HORVÁTH Ann. Mus. Nat. Hung. **20**.

*Dismegistus* systematic position pp. 70–72, BERGROTH Ann. Soc. ent. belg. **63**.

*Empicoris horvathi* n. n. for *E. pilosa* Horváth nec Fieber p. 163, MCATEE & MALLOCH Proc. Biol. Soc. Wash. **36**.

*Eurydema ornatum* development, figs. p. 37, PÉNEAU Bull. Soc. Sci. nat. Nantes (4) **1** 1921.

*Euschistus lizerianus* sp. n. Argentina p. 316, PENNINGTON Physis **6**.

*Halyss persa* sp. n. S.E. Persia p. 1, BERGROTH Arch. Natg. **83** A **2**.

*Menida insignita* sp. n. E. Persia p. 2, BERGROTH t.c.

*Neoderoploa* gen. n. near *Deroploa* Westw. p. 317, *bruchii* sp. n. Cordoba p. 318 (fig.), PENNINGTON Physis **6**.

*Nesogenes* gen. n. p. 145 for *Cimex boscii* Labr., HORVÁTH Ann. Mus. Nat. Hung. **18** 1921.

*Odontotarsus intermedius* p. 201, *humeralis* p. 202 spp. n., *grammicus* var. n. *exutus* p. 203 Algeria, HORVÁTH Bull. Soc. Hist. nat. Afr. N. **14**.—*O. horvathianus* see *Urothyreus*.

*Orocephalus* synonymy, *rotundatus* sp. n. Algeria p. 204, HORVÁTH Bull. Soc. Hist. nat. Afr. N. **14**.

*Parastrachia* systematic position pp. 70–72, BERGROTH Ann. Soc. ent. belg. **63**.

*Perillus bioculatus* life-history & colour pattern, KNIGHT 19th Rept. Minnesota State Ent. pp. 50–96 1 fig. 3 pls.

*Phloea paradox* early stages p. 109, BRIEN Bull. Soc. ent. Belg. **5**.

*Podops cinctipes* ecology, PARSHLEY  
Canad. Ent. 55 pp. 69-71.

*Psacasta horvathi* sp. n. Spain p. 38,  
ROYER Bull. Soc. ent. Fr. 1923.

*Pylophora* gen. n. (near *Bagrada*  
Stål) p. 129 for *insularis*, *punctata*  
p. 130 spp. n. Mexico, VAN DUZEE  
Proc. Cal. Acad. Sci. 12.

*Rhaphigaster nebulosa* biology p. 1,  
HORVÁTH Rovart. L. 26.

*Rhytidolomia saucia* ecology, PARSHLEY  
Canad. Ent. 55 pp. 69-71.

*Thyanta panda* p. 128, *jugosa* p. 129  
Lower California spp. n., VAN DUZEE  
Proc. Cal. Acad. Sci. 12.

*Urothyreus* gen. n. for *Odontotarsus*  
*horváthianus* Schout. p. 146, HORVÁTH  
Ann. Mus. Nat. Hung. 18 1921.

#### COREIDAE.

*Catorhintha borinquensis* sp. n. Porto  
Rico p. 1, BARBER Amer. Mus. Novit.  
no. 75.

*Chorosoma schillingi* early stages p.  
203, BUTLER Ent. Mo. Mag. 59 1923.

*Coriomeris* key to palaeartic p. 74,  
*brevicornis* p. 76 Crete, *planicornis* p.  
79 Corfu, Lesbos spp. n. figs., LINDBERG  
Ann. Mus. Nat. Hung. 20.

*Corizus campoi* sp. n. Chile p. 158,  
PORTER Rev. chil. Hist. nat. 24 1921.

*Hyalymenus subinermis* sp. n. Mexico  
p. 134, VAN DUZEE Proc. Cal. Acad.  
Sci. 12.

*Jadera rubrofusca* sp. n. Porto Rico  
p. 2, BARBER Amer. Mus. Novit. no.  
75.

*Leptocoris trivittatus* spermatogenesis  
pp. 287-299, YOCOM J. Morph. 37.

*Mozena hector* p. 132, *rufula* p. 133  
spp. n. Mexico, VAN DUZEE Proc. Cal.  
Acad. Sci. 12.

*Stictopleurus mixtus* sp. n. France p.  
308, *crassicornis* L. and *abutilon* Rossi  
distinguished figs. p. 302, RIBAUT  
Bull. Soc. Hist. nat. Toulouse 49 1921.

*Syromastes marginatus* development,  
figs. p. 39, PÉNEAU Bull. Soc. Sci. nat.  
Nantes (4) 1 1921.

*Trachelium spectabile* sp. n. Peru p.  
68, BERGROTH Ann. Mus. Nat. Hung.  
18 1921.

(N-12519 j) ♀

#### ARADIDAE.

*Aradus 4-lineatus* bionomics, egg,  
first instar nymph described, BARBER  
Psyche 30 pp. 120-122 2 figs.

#### BERYTIDAE, COLOBATHRISTIDAE.

Colobathristid larva described, genus  
unknown, p. 71, BERGROTH Ann. Mus.  
Nat. Hung. 18 1921.

*Jalysus spinosus* life-history fig. p.  
230, READIO Canad. Ent. 55.—*J.  
moorei* sp. n. fig. Chile p. 20, PORTER  
Rev. chil. Hist. nat. 27.

*Trichocentrus gibbosus* Horv. figured  
p. 70, BERGROTH Ann. Mus. Nat. Hung.  
18 1921.

#### LYGAEIDAE.

Revision of Lygaeidae of Connecticut,  
with keys, p. 708, BARBER Conn. N. H.  
Surv. Bull. 34.

*Aphanus brevirostris* sp. n. France and  
key to species p. 68, RIBAUT Bull. Soc.  
Hist. nat. Toulouse 48 1921.

*Arocatus grassii* sp. n. Italy p. 101,  
PICCO Bol. Soc. zool. ital. 1919.

*Geocoris barrosi* sp. n. Chile p. 193  
fig., PORTER Rev. chil. Hist. nat. 21  
1917.—*G. sonorensis* sp. n. Mexico p.  
138, VAN DUZEE Proc. Cal. Acad. Sci.  
12.

*Henestaris oschanini* sp. n. Manchuria  
p. 3, BERGROTH Arch. Natg. 83 A 2.

*Leuconyssius tachirtensis* sp. n. Atlas  
Mts. fig. p. 154, BERGEVIN Bull. Soc.  
Sci. nat. Maroc 3.

*Lygaeus kalmii* subsp. n. *angustio-*  
*marginalis* U.S.A. p. 14, PARSHLEY  
Occ. Paprs. Mus. Zool. Univ. Michigan  
no. 71 1919.—*L. kalmii* distribution  
and forms, PARSHLEY Canad. Ent. 55  
pp. 81-84.—*L. kalmii* and allies p.  
214, VAN DUZEE Canad. Ent. 55.—  
*L. albonotatus* p. 2 (? *Melanostethus*)  
*coccineus* p. 3 spp. n. Porto Rico, BAR-  
BER Amer. Mus. Novit. no. 75.

*Mimobius* gen. n. *capito* sp. n.  
Madagascar p. 77, BERGROTH Ann.  
Mus. Nat. Hung. 18 1921.

*Orthaea* key to European species in  
N. America p. 22, PARSHLEY Ent.  
News 34.—*O. ferruginosa* sp. n. Porto  
Rico & S. Domingo p. 4, BARBER Amer.  
Mus. Novit. no. 75.

*Oxycarenus hyalinipennis*, bionomics &c., KIRKPATRICK Min. Agr. Egypt. Bull. 35 107 pp. 45 figs.

*Pachygrontha parvula* sp. n. Porto Rico p. 4, BARBER Amer. Mus. Novit. no. 75.

*Piocoris succineus* sp. n. Obock p. 65, ROYER Bull. Soc. ent. Fr. 1923.

*Poeantius velox* p. 79, *pernix* p. 80, *furax* p. 81, Orange Free State, *procax* p. 82 Senegal, spp. n. and key, BERGROTH Ann. Mus. Nat. Hung. 18 1921.

*Rhyparochromus arenicolor* sp. n. Turkestan p. 5, BERGROTH Arch. Natg. 83 A 2.

*Togo praetor* sp. n. Japan p. 4, BERGROTH t.c.

*Vertemannus* sp. larva described p. 73, BERGROTH Ann. Mus. Nat. Hung. 18 1921.

*Xenydrium* gen. n. *formiciforme* sp. n. Venezuela p. 75, BERGROTH Ann. Mus. Nat. Hung. 18 1921.

#### PYRRHOCORIDAE.

*Arrhaphe cicindeloides* p. 69, *mimica* p. 70 larvae described, figs., BERGROTH Ann. Mus. Nat. Hung. 18 1921.

*Euryopthalmus obovatus* sp. n. Porto Rico & S. Domingo p. 6, BARBER Amer. Mus. Novit. no. 75.—*E. cinctus* subsp. *n. californicus* California p. 270, VAN DUZEE Canad. Ent. 55.

*Pyrrhocoris apterus* propagation pp. 47–51, GUTHERZ Sitz Ber. Ges. Natf. Freunde 1921.

#### TINGIDAE.

Spelling of the name Tingidae p. 272, BAKER Science 57.

*Atheas tristis* sp. n. Lower California p. 143, VAN DUZEE Proc. Cal. Acad. Sci. 12.—*A. pallidus* sp. n. Porto Rico p. 6, BARBER Amer. Mus. Novit. no. 75.

*Bako* gen. n. *lebruni* sp. n. Belgian Congo p. 91, SCHOUTEDEN Rev. zool. afr. 11.

*Cantacader gounellei* fig. Brazil, p. 81, *magnifica* Malaya p. 83, spp. n., DRAKE Bull. Brooklyn Ent. Soc. 18.

*Catoplatus burgeoni* sp. n. Belgian Congo p. 89, SCHOUTEDEN Rev. zool. afr. 11.

*Compseuta picta* sp. n. p. 108 (with var. n. *brevicarinata* p. 108, *funebris* p. 109), *dispar* sp. n. p. 109, Belgian Congo, SCHOUTEDEN t.c.

*Copium antennatum*, *bequaerti* p. 86, *ghesquierei* p. 87, *lupakense* p. 88, Belgian Congo spp. n., SCHOUTEDEN t.c.

*Corythucha canadensis* sp. n. B. Columbia p. 18, *marmorata* var. n. *informis* Canada p. 20, *hesperia* sp. n. B. Columbia p. 23, PARSHLEY Occ. Paprs. Mus. Zool. Univ. Michigan no. 71 1919.

*Cysteochila tombeuri* sp. n. Belgian Congo p. 103 SCHOUTEDEN Rev. zool. afr. 11.

*Dolichocysta obscura* sp. n. Mexico p. 140, VAN DUZEE Proc. Cal. Acad. Sci. 12.

*Eteoneus congolensis* sp. n. Belgian Congo p. 85, SCHOUTEDEN Rev. zool. afr. 11.

*Galeatus uhleri* sp. n. New Mexico p. 108, HORVÁTH Ann. Carnegie Mus. 15.

*Gargaphia insularis*, *gentilis*, spp. n. Mexico p. 141, VAN DUZEE Proc. Cal. Acad. Sci. 12.

*Habrochila horvathi* sp. n. Belgian Congo p. 92, SCHOUTEDEN Rev. zool. afr. 11.

*Monanthia formosa* p. 102, *sauteri* p. 103 spp. n. Formosa, DRAKE Ohio J. Sci. 23.—*M. burgeoni* sp. n. (with var. n. *satanas*) Belgian Congo p. 107, SCHOUTEDEN Rev. zool. afr. 11.

*Paseala* gen. n. p. 93, *arnoldi* sp. n. Belgian Congo p. 94, SCHOUTEDEN t.c.

*Phyllontocheila* (*Phyllontochella*) *bangensis* p. 96, *burgeoni* p. 97 (with var. n. *depicta* p. 98), *ghesquierei* p. 99, *spinosa* p. 100, *vanderijstii* p. 101, spp. n. Belgian Congo, SCHOUTEDEN t.c.

*Physatochila josephinae* sp. n. Belgian Congo p. 106, SCHOUTEDEN t.c.

*Teleonemia nigerrima* sp. n. Belgian Congo p. 104, SCHOUTEDEN t.c.—*T. sororcula* sp. n. Lower California p. 142, VAN DUZEE Proc. Cal. Acad. Sci. 12.

*Tingis pyri* life-history p. 160, GAUTIER, BONNAMOUR, CHIFFLOT Ann. Soc. linn. Lyon **69**.

*Tropidocheila maynei* sp. n. Belgian Congo p. 105, SCHOUTEDEN Rev. zool. afr. **11**.

*Xenotingis* gen. n. *horni* sp. n. Formosa p. 105, DRAKE Ohio J. Sci. **23**.

*Zosmenus capitatus* biology pp. 1-30 fig., EXT Arb. Biol. Reichsanst. Land- u. Forstw. **12**.

#### PHYMATIDAE.

*Carcinochelis bianchii* sp. n. Indo-China p. 33, BERGROTH Notulae ent. **3**.

#### REDUVIIDAE.

Habits, synonymy, distribution of Brazilian blood-sucking Reduviidae, key, pp. 98-104, NEIVA & PINTO Brazil-Medico **37** (1).

*Bactrodes* key p. 247, MCATEE & MALLOCH Ann. Ent. Soc. Amer. **16**.

*Bagriella* gen. n., *ornata* sp. n. Canal Zone p. 253, MCATEE & MALLOCH t.c.

*Emesodema domestica* biology pp. 79-81, BONNAMOUR Ann. Soc. linn. Lyon **67** 1921.

*Homognetus* gen. n. near *Gastrogyrus* p. 18, *nigripennis* sp. n. Borneo p. 19, BERGROTH Not. ent. **3**.

*Lutevopsis chilensis* sp. n. Chile p. 505, PORTER Rev. chil. Hist. nat. **25**.

*Oncerotrachelus* key, *coxatus* sp. n. C. & S. America p. 249, MCATEE & MALLOCH Ann. Ent. Soc. Amer. **16**.

*Oncocephalus erectus* sp. n. Lower California p. 144, VAN DUZEE Proc. Cal. Acad. Sci. **12**.

*Pirates hybridus* Scop. and *stridulus* F. distinct p. 35, RIBAUT Bull. Soc. Hist. nat. Toulouse **48** 1920.

*Ploaiariodes barbei* sp. n. p. 7, MCATEE & MALLOCH in BARBER Amer. Mus. Novit. no. **75**.

*Ploaiariola canadensis* sp. n. B. Columbia p. 25, PARSHLEY Occ. Paras. Mus. Zool. Univ. Michigan no. **71** 1919.

(n-12519 ♂) Q

*Ploaiariopsis sonoraensis* sp. n. Mexico p. 144, VAN DUZEE Proc. Cal. Acad. Sci. **12**.

*Rhinocoris costai* sp. n. Italy p. 99, PICCO Bol. Soc. zool. Ital. **1919**.—*R. iracundus* and *cruentus* distinguished, figs., p. 65, *cuspidatus* nom. n. for *cruentus* Rib. (nec F.) p. 301, RIBAUT Bull. Soc. Hist. nat. Toulouse **49** 1921.

*Rhodnius prolixus* Stål and *pictipes* Stål, synonymy, *domesticus* sp. n. pp. 20-24 Brazil, NEIVA & PINTO Brazil-Medico **37** (1).

*Saica*, key p. 250, *recurvata* subsp. *n. antillarum* W. Indies p. 251, MCATEE & MALLOCH Ann. Ent. Soc. Amer. **16**.

*Sinea diadema* early stages figs. p. 74, BARBER Psyche **30**.

*Stenolemus novaki* records in France, ROYER Bull. Soc. ent. Fr. **1922** p. 321, and CHOBAUT op. cit. **1923** p. 81.

*Tagalis*, key to species p. 252, *inornata* subsp. *n. cubensis* p. 253, MCATEE & MALLOCH Ann. Ent. Soc. Amer. **16**.

*Triatoma oswaldoi* p. 47, *melanoccephala*, *lutzi* pp. 73-76, *gomesi* p. 86, spp. n. Brazil, NEIVA & PINTO Brazil-Medico **37** (1).—*T. flava* biology in Cuba p. 111, HOFFMAN Ent. News **34**.

*Tribelocephala torva* sp. n. Indo-China p. 18, BERGROTH Not. ent. **3**.

#### NABIDAE.

*Gorpis neotropicalis* sp. n. Porto Rico p. 8, BARBER Amer. Mus. Novit. no. **75**.

*Reduviolus subcoleoptratus* larva described p. 85, BERGROTH Ann. Mus. Nat. Hung. **18**, 1921.

#### ANTHOCORIDAE.

*Tetraphleps osborni* sp. n. N.Y. State, p. 67, DRAKE N.Y. State Coll. Forestry Tech. Pubn. **16**.

*Triphleps (Dimorphella) frumenti* sp. n. in grain from River Plate p. 236, ZACHER Arb. Biol. Reichsanst. Land- u. Forstw. **12**.

## CAPSIDAE (MIRIDAE).

Revision of Miridae of Connecticut with keys, p. 422 (figs.), KNIGHT Conn. N. H. Surv. Bull. 34.

*Acegima* gen. n. p. 47, *albofasciata* sp. n. Bolivia p. 48, POPPIUS Ann. Mus. Nat. Hung. 18 1921.

*Allommatus triangulifer* Argentine p. 38, *minor* Peru p. 39 spp. n., POPPIUS t.c.

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*Atractotomus magnicornis* var. n. *tuenoi* New York p. 461, KNIGHT Conn. N. H. Surv. Bull. 34.

*Barberiella apicalis* sp. n. New York p. 657, KNIGHT Conn. N. H. Surv. Bull. 34.

*Blanchardiella* gen. n. p. 60, *unicolor* p. 61, *unifasciata* p. 62, *bifasciata* p. 63 spp. n. Chili, POPPIUS Ann. Mus. Nat. Hung. 18 1921.

*Calyptodera* gen. n. (near *Charagochilus*) for *robusta* sp. n. Mexico p. 150, VAN DUZEE Proc. Cal. Acad. Sci. 12.

*Cyrtorhinus caricus* var. n. *vagus* U.S.A. p. 511, KNIGHT Conn. N. H. Surv. Bull. 34.

*Dicyphus gracilentus* sp. n. U.S.A. p. 21, PARSHLEY Ent. News 34.—*D. disclusus* p. 152, *diffractus* p. 153 spp. n. Mexico, VAN DUZEE Proc. Cal. Acad. Sci. 12.—*D. discrepans* sp. n. New York & Minnesota p. 477, KNIGHT Conn. N.H. Surv. Bull. 34.

*Dolichostenia* gen. n. for *Phytocoris trigonalis* Spin. p. 59, POPPIUS Ann. Mus. Nat. Hung. 18 1921.

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*Excentricus mexicanus* sp. n. Lower California p. 163, VAN DUZEE Proc. Cal. Acad. Sci. 12.

*Fiebrigella* gen. n. p. 44, *humeralis* (genotype) Paraguay, *silvestrii* Brazil spp. n. p. 45, POPPIUS Ann. Mus. Nat. Hung. 18 1921.

*Haarupia* gen. n. p. 40, *spinosa* (type) p. 41, *pallida* p. 42, spp. n. Argentine, POPPIUS t.c.

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1923.

*Myrmecoridea* gen. n. p. 58, *gracillima*  
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Mus. Nat. Hung. 18 1921.

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*Pilophorus*, key p. 70, RIBAUT Bull.  
Soc. Hist. nat. Toulouse 48 1921.—*P.*  
*juniperi* sp. n. U.S.A. p. 543, KNIGHT  
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*Pithanus ragusae* var. n. *gallica* France  
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Sci. 12.—*P. luridus* new to Britain p. 28,  
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*Rhinocapsus miniatus* sp. n. New  
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Surv. Bull. 34.

*Sericophanes niger* p. 52, *obscuricornis*  
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Hung. 18 1921.

*Sthenarus humeralis* sp. n. Lower  
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*Teleorhinus tephrosicola* sp. n. New York & New Jersey p. 476, KNIGHT Conn. N. H. Surv. Bull. 34.

*Tuponia pallidicornis* sp. n. Lower California p. 162, VAN DUZEE Proc. Cal. Acad. Sci. 12.

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*Xenetopsis* gen. n. p. 37, *peruana* sp. n. Peru p. 38, POPPIUS Ann. Mus. Nat. Hung. 18 1921.

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#### HYDROMETRIDAE, VELIIDAE.

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*Microvelia*, taxonomic characters pp. 138–143, TORRE-BUENO Bull. Brooklyn Ent. Soc. 18.

#### GERRIDAE.

*Gerris asper* p. 132, *odontogaster* p. 133, in France, Bull. Soc. ent. Fr. 1923.

*Halobates* in Hawaii pp. 283–284, BRYAN Proc. Hawaiian Ent. Soc. 5.

*Rheumatobates hungerfordi* sp. n. Texas fig. p. 202, WILEY Canad. Ent. 55.

*Rhyacobates* gen. n. p. 387, *takahashii* sp. n. fig. p. 388 Formosa, ESAKI Philip. J. Sci. 22.

#### SALDIDAE.

*Chartolampra* subgen. n. see *Chartoscirta*.

*Chartoscirta* (*Chartolampra* subgen. n.), *cursitans* sp. n. New York State p. 151, TORRE-BUENO Bull. Brooklyn Ent. Soc. 18.

*Orthophrys mexicanus* sp. n. Mexico p. 165, VAN DUZEE Proc. Cal. Acad. Sci. 12.

†*Salda littoralis*, new as fossil in Denmark, JESSEN Medd. Geol. 14 pp. 1–18.

*Saldua major, pallipes* life-history, pp. 301–307 fig., WILEY Kansas Univ. Sci. Bull. 14 1922.

#### NAUCORIDAE, NEPIDAE, MONORYCHIDAE, OCHTERIDAE.

Revision of Nepidae of N. America, HUNGERFORD Kansas Univ. Sci. Bull. 14 pp. 425–453 8 pls.

*Aphelochirus aestivalis* morphology and physiology of tracheal system pp. 48–66, 94, figs., SZABÓ-PATAY Allatt. Kozlem. 17 1918.

*Curicta*, biology pp. 507–508 fig., WILEY Kansas Univ. Sci. Bull. 14 1922.—*C.* key p. 429, *drakei* sp. n. fig. America p. 432, HUNGERFORD Kansas Univ. Sci. Bull. 14 1922.

*Gelastocoris barberi* sp. n. Illinois p. 393 fig., TORRE-BUENO Conn. N. H. Surv. Bull. 34.—*G. oculatus* life-history pp. 145–171 fig., HUNGERFORD Kansas Univ. Sci. Bull. 14.

*Ochterus formosanus*, bionomics, p. 67, TAKAHASHI Bull. Brooklyn Ent. Soc. 81.

*Ranatra* key p. 439, *buenoi* p. 442, *australis* p. 449, Texas *drakei* p. 451 Florida spp. n. fig., HUNGERFORD Kansas Univ. Sci. Bull. 14.

#### NOTONECTIDAE, CORIXIDAE.

Revision of Corixidae of Connecticut, with keys, p. 386 figs., ABBOTT Conn. N. H. Surv. Bull. 34.

Notes on eggs of Corixidae, HUNGERFORD Bull. Brooklyn Ent. Soc. 18.

Revision of Australian Notonectidae p. 397 figs., HALE Rec. S. Aust. Mus. 2.

†Fossil Corixidae from Poland pp. 55–59, JACZEWSKI Rozpr. wiadom. Mus. Dzieduszyckich 7–8.

*Anisops*, key to Australian p. 400, *hyperion* biology & life history p. 405, *ocularis* p. 412, *gratus* p. 413, *calcaratus* p. 416 spp. n., synonymy figs., HALE Rec. S. Aust. Mus. 2.

*Arctocoris scotti* redescribed pp. 142–150 fig., GAJL & JACZEWSKI Rozpr. wiadom. Mus. Dzieduszyckich 5–6.—*A. fossarum* Leach, *scotti* Douglas & Scott (= *prominula* Thom.) redescribed p. 308 figs., JACZEWSKI Ann. Biol. lacustre 12.

*Buenoa limnoccatoris* sp. n. Minnesota p. 150, HUNGERFORD Ent. News. 34.

*Corixa (Macrocorixa)*, notes on subgenus pp. 129-131, MAC GILLAVRY Ent. Ber. 6.—*C. lugubris* development, figs., p. 41, PÉNEAU Bull. Soc. Sci. Nantes (4) 1 1921.

*Cymatia* eggs p. 161, BUTLER Ent. Mo. Mag. 59.

*Notonecta* of the Normandy region pp. 299-301 (fig.), POISSON Bull. Soc. ent. Fr. 1922.—*N. borealis* sp. n. fig. N. America p. 104, TORRE-BUENO & HUSSEY Bull. Brooklyn Ent. Soc. 18.—*N. glauca* experimental effects upon pigmentation p. 208, FINKLER Anz. Ak. Wiss. Wien 59 1922.

*Plea punctifer* Porto Rico p. 10, *puella* Porto Rico & Guadeloupe p. 11 spp. n., BARBER Amer. Mus. Novit. no. 75.

*Porocorixa* eggs p. 161, BUTLER Ent. Mo. Mag. 59.

#### TERMITOCORIDAE.

*Termitaphis* key p. 408, *guianae* p. 405 Br. Guiana, *trinidadensis*, *insularis* p. 406 Trinidad spp. n. figs., MORRISON Zoologica 3.

#### Homoptera.

Leafhoppers and their relation to plant formations, DE LONG Ann. Ent. Soc. America 16 pp. 363-371.

Homoptera in the vicinity of Cranberry Lake & their life-histories, OSBORN N. Y. State Coll. Forestry Tech. Pubn. 16 1922 pp. 24-54 87-104 2 pl. 17 figs.

#### CICADIDAE.

Revision of Cicadidae of Connecticut, with keys, p. 238 (figs.), DAVIS Conn. N. H. Surv. Bull. 34.

Revision of Cicadidae of Malaysia pp. 69-182 pls., MOULTON J. F. M. S. Mus. 11.

Cicadidae in Formosa, SONAN Trans. N. H. Soc. Formosa 11 1921 pp. 163-172.

*Abroma tahanensis* sp. n. Malaya p. 156, MOULTON J. F. M. S. Mus. 11.

*Cicada pekinensis* sp. n. Pekin p. 296, HAUPP D. ent. Zs. 1923.—*C. signifera* see *Pacarina puella*.—*C. sayi* see *Tibicen chloromera*.

*Cicadatra longipennis* Palestine p. 227, *decumana* Syria p. 228, *pallasi* Siberia p. 229, *abdominalis* N. Syria p. 231 spp. n., *platyptera* ff. n. *melanaria* Syria, *livida* Palestine p. 227, SCHUMACHER D. ent. Zs. 1923.

*Cosmopsaltria hastata* Siam p. 88, *nigripes* Malaya p. 89, *brooksi* Sumatra p. 93 figs. spp. n., MOULTON J. F. M. S. Mus. 11.

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*Maua linggana* sp. n. Sarawak p. 125, MOULTON t.c.

*Melampsalta campbelli* sp. n. New Zealand p. 430, MYERS Trans. N. Z. Inst. 54.

*Mogannia sumatrana*, *montana*, *malayana* p. 161, *flammeifera* p. 162, *grelaka* p. 163, *rosea* p. 165, spp. n. figs. Malaya, MOULTON J. F. M. S. Mus. 11.

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*Okanaganaga nigrodorsata* sp. n. California p. 13 figs., DAVIS J. N. Y. Ent. Soc. 31.

*Pacarina puella* nom. n. for *Cicada signifera* Walker p. 11 figs., DAVIS t.c.

*Pauropsalta lindsayi*, *maorica* spp. n. New Zealand p. 431, MYERS Trans. N. Z. Inst. 54.

*Platylomia pendleburyi* sp. n. Siam p. 100, *saturata* subsp. n. *perakana* Perak p. 101 figs., MOULTON J. F. M. S. Mus. 11.

*Platyleura kaempferi* subsp. n. *annamensis* S. Annam p. 142, MOULTON t.c.

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*Scieroptera distanti* sp. n. China p. 123, SCHMIDT Arch. Natg. 85 A 7 1920.

*Tanna bakeri* sp. n. Borneo p. 127, MOULTON J. F. M. S. Mus. 11.

*Tibicen chloromera* (= *Cicada sayi* Smith & Grossbeck) p. 3, *chiricahua* p. 8, *parallela* spp. n. N. America p. 10 figs., DAVIS J. N. Y. Ent. Soc. 31.—*T. septemdecim* physiology of digestion pp. 200–212, HARGITT Biol. Bull. Wood's Hole Mass. 45.—*T. septemdecim* digestive system of nymph pp. 213–221 figs., HICKERNELL Biol. Bull. Wood's Hole Mass. 45.

*Trengganua* gen. n. for *Gaeana sibylla* p. 147, MOULTON J. F. M. S. Mus. 11.

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*Ricanoflata* gen. n. type *Ormenis perfecta* Walk. p. 67, MELICHAR t.c.

#### MEMBRACIDAE.

Walker's species of Membracidae from United States and Canada, FUNKHOUSER Ann. Ent. Soc. America 16 pp. 97-112.

Revision of Membracidae of Connecticut with keys, p. 163 (figs.), FUNKHOUSER Conn. N. H. Surv. Bull. 34.

The Membracidae of Kansas, LAWSON Kansas Univ. Sci. Bull. 14 pp. 31-110 7 pls.

Second Report on the Membracidae of S. Dakota, SEVERIN 14th Ann. Rept. S. Dakota State Ent. 1923 pp. 27-33.

*Endoastus productus* sp. n. Br. Guiana p. 233 figs., OSBORN Zoologica 3 1921.

*Hamma mabirensis* sp.n. Uganda p. 463 figs., CHINA Ann. Mag. N. H. (9) 11.

*Hypsoprora simplex* sp. n. Lower California p. 169, VAN DUZEE Proc. Cal. Acad. Sci. 12.

*Multareis planifrons* p. 170, *digitatus* p. 171, spp. n. Lower California, VAN DUZEE t.c.

*Ophiderma pubescens* Emmons (= *flaviguttula* Godg.) var. *definita* Woodr. a good sp. U.S.A. p. 189, WOODRUFF J. N. Y. Ent. Soc. 31.

*Platycentrus brevicornis* sp. n. Mexico p. 171, VAN DUZEE Proc. Cal. Acad. Sci. 12.

#### CERCOPIDAE.

Revision of Cercopidae of Connecticut with keys, p. 206 figs., STEARNS Conn. N. H. Surv. Bull. 34.

*Amberana pygmaea* sp. n. Madagascar p. 101, SCHMIDT Arch. Natg. 85 A 7 1920.

*Ambonga* gen. n. p. 15, *apicenota* sp. n. Madagascar p. 16, MELICHAR Verh. zool.-bot. Ges. Wien 65 1915.

*Augustohahnia* gen. n. p. 102 *barbata* sp. n. New Guinea p. 103, SCHMIDT Arch. Natg. 85 A 7 1920.

*Callitettix ruficeps* sp. n. India p. 8, MELICHAR Verh. zool. bot. Ges. Wien 65 1915.

*Cercopis fasciata* var. n. *punctum* Syria p. 35, *sanguinolenta* var. n. *turkestanica* Turkestan p. 36, LINDBERG Notulae ent. 3.

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*Clovia hyalinobipuncta* sp. n. N. Guinea p. 5, MELICHAR Verh. zool.-bot. Ges. Wien 65 1915.

*Cosmoscarta bifasciata* f. n. *grossomaculata* India to Tonkin & Java, p. 301, HAUPT D. ent. Zs. 1923.

*Dauphina* synonymy p. 235, LALLEMAND Ann. Mag. N. H. (9) 11.

*Ecothera* gen. n., *insignis* sp. n. Paraguay p. 6, MELICHAR Verh. zool.-bot. Ges. Wien 65 1915.

*Eooscarta melli, karschi* spp. n. China p. 124, SCHMIDT Arch. Natg. 85 A 7 1920.—*R. seminiger* f. n. *saturata, fuscipennis* sp. n. E. Asia p. 305, HAUPT D. ent. Zs. 1923.

*Eubakeriella* gen. n. p. 107, *spectabilis* sp. n. Sumatra p. 108, LALLEMAND Phil. J. Sci. 22.

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*Hemiaufidus* gen. n. p. 110, *gerda* (genotype), *elsa* Sumatra p. 111, *mentawaiensis* p. 112 spp. n., SCHMIDT Arch. Natg. 85 A 7 1920.

*Hemibandusia* gen. n. p. 114, *baetkei* sp. n. Fernando Po p. 115, SCHMIDT t.c.

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*Jacobsoniella bakeri* sp. n. Luzon p. 109, SCHMIDT Arch. Natg. 85 A 7 1920.

*Lehina* gen. n., *dilecta* sp. n. W. Africa p. 7, MELICHAR Verh. zool.-bot. Ges. Wien 65 1915.—*L. apicalis* Hagl. (= *dilecta* Mel.) p. 234, LALLEMAND Ann. Mag. N. H. (9) 11.

*Leptataspis moultoni* p. 269, *perakensis* Malaya, *medanensis* Sumatra p. 270 spp. n., LALLEMAND J. Malayan Br. R. Asiat. Soc. 1.—*L. butuanensis, bukidnona* spp. n. Philippines p. 104, LALLEMAND Phil. J. Sci. 22.

*Lepyronia quadrangularis* biology and morphology pp. 515–569 fig., DOERING Kansas Univ. Sci. Bull. 14.—*L. quad-*

*rangularis* life-history p. 169 fig., GARMAN Ann. Ent. Soc. America 16.—*L. gracilior* sp. n. Siberia p. 37 fig., LINDBERG Notulae ent. 3.

*Lepyronoxia* gen. n., *venosa* sp. n. Brazil p. 8, MELICHAR Verh. zool.-bot. Ges. Wien 65 1915.

*Lierna haglundi* p. 107 (with var. n. *obscurata*), *limbata* p. 108 spp. n. W. Africa, SCHMIDT Arch. Natg. 85 A 7 1920.

*Locris marshalli* p. 230, *sylvatica* p. 231, *atra* p. 232, *quadrinotata* p. 233, *ibadana* p. 233, *pulverosula* p. 234 spp. n., Africa, LALLEMAND Ann. Mag. N. H. (9) 11.

*Mahanarva aenea* Paraguay, *soluta* Bolivia p. 14 spp. n., MELICHAR Verh. zool.-bot. Ges. Wien 65 1915.

*Monecphora bicincta* and var. *ignipecta* p. 89, BORING Psyche 30.

*Moultoniella* gen. n., *bipars* sp. n. Malacca, p. 267, LALLEMAND Malayan Br. R. Asiat. Soc. 1.

*Notoscarta biplagiata* sp. n. New Guinea p. 106, SCHMIDT Arch. Natg. 85 A 7 1920.

*Opistarsostethus calypso* sp. n. Philippines p. 105, LALLEMAND Phil. J. Sci. 22.—*O. humilis* sp. n. Malaya p. 268, LALLEMAND J. Malayan Br. R. Asiat. Soc. 1.

*Perinoia transversa* sp. n. Key Islands p. 5, MELICHAR Verh. zool. bot. Ges. Wien 65 1915.

*Philaenus exclamationis* var. n. *nigerrimus* Finland, *albibennis* var. n. *albosellatus* Siberia p. 40, *lutheri* sp. n. p. 41 (with var. n. 7—*maculata, melanurus* p. 42) Krasnaja Poljana figs., LINDBERG Notulae ent. 3.—*P. lineatus* anatomy pp. 153–155 fig., HERVEY Proc. Acadian Ent. Soc. 8.

*Philagra semivittata* sp. n. Central Asia p. 5, MELICHAR Verh. zool.-bot. Ges. Wien 65 1915.—*P. quadrimaculata* sp. n. China p. 125, SCHMIDT Arch. Natg. 85 A 7 1920.

*Philaronia bilineata* var. n. *infuscatus, pallidus* Wyoming, Colorado, Wisconsin p. 230, STEARNS Conn. N. H. Surv. Bull. 34.

*Phymatostetha albifarsis* sp. n. Java p. 16, MELICHAR Verh. zool.-bot. Ges. Wien 65 1915.—*P. rubens, dapitana* p. 101, *cincta* p. 102, *iligana* p. 103 spp. n., Philippines, LALLEMAND Phil. J. Sci. 22.—*P. selangorina* sp. n. Selangor p. 268, LALLEMAND J. Malayan Br. R. Asiat. Soc. 1.

*Pseudaufidus* gen. n. p. 112, *tonkinensis* sp. n. pp. 113, SCHMIDT Arch. Natg. 85 A 7 1920.—*Pseudaufidus* Schmidt (= *Tanuphis* Jac.), schmidti p. 302, *semirufus* p. 303 spp. n. E. Asia, key, p. 304, HAUPT D. ent. Zs. 1923.

*Pseudocercopis* gen. n. *longirostris* sp. n. New Guinea p. 105, SCHMIDT Arch. Natg. 85 A 7 1920.

*Pseudocraniolum* n. n. for *Pseudocranion* Schmidt (nec Reitter) p. 72, HEDICKE D. ent. Zs. 1923.

*Pseudocranion* Schmidt see *Pseudocraniolum*.

*Pseudomachaerota* gen. n. p. 1, *olivacea* sp. n. Madagascar p. 2 (fig.), MELICHAR Verh. zool.-bot. Ges. Wien 65 1915.

*Ptyelus bivittatus* sp. n. Kamerun p. 115, SCHMIDT Arch. Natg. 85 A 7 1920.

*Radioscarta* gen. n. p. 105, *surigaona* sp. n. p. 106 Philippines, LALLEMAND Phil. J. Sci. 22.

*Tanuphis* Jac. see *Pseudaufidus*.

*Tomaspis rufifrons, cingula* Paraguay, *comitata* p. 9, *discoidea* Bolivia, *semi-rufa* Ecuador p. 10, *trifasciata* Bolivia, *solita* Venezuela, *quadripustulata* Paraguay p. 11, *curvata* French Guiana, *consita* p. 12, *rubropicta, partenia* Paraguay p. 13 spp. n., MELICHAR Verh. zool.-bot. Ges. Wien 65 1915.

*Triecphora sexguttata* sp. n. Madagascar p. 15, MELICHAR t.c.

*Weigoldella* gen. n. (Machaerotinae) p. 299 fig., *bipunctata* sp. n. E. Asia p. 300, HAUPT D. ent. Zs. 1923.

#### JASSIDAE (CICADELLIDAE).

Morphology of Cicadellidae, BRITTAINT p. 57-67, classification BRITTAINT & WHITEHEAD Proc. Acad. Ent. Soc. 8 pp. 128-146.

Revision of Cicadellidae of Connecticut, with keys, p. 56 figs., DE LONG Conn. N. H. Surv. Bull. 34.

Key to New Zealand subfamilies of Cicadellidae, p. 408, genera, pp. 415, 422, MYERS Trans. N. Z. Inst. 54.

Ovipositors of the Cicadellidae, READIO Kansas Univ. Sci. Bull. 14 pp. 217-298 12 pls.

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Sci. Russie 1923 pp. 43–45.

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*Macrosiphum*, key p. 4, *formosanum* p. 6, *misanthi* p. 8 (= *granarium*, p. 14, pt. 2), *alopurri* p. 9, *paederiae* p. 11, *smilacifoliae* p. 12, *neoartemisiae* p. 13 Formosa and Japan spp. n. figs., TAKAHASHI Aphididae of Formosa pt. 1 1921.—*M. cirsicola* p. 10, *debilis* p. 11, *taiwanum* p. 16, Formosa and Japan spp. n. figs., ID. op. cit. pt. 2 1923.—*M. hellebori* p. 62, *epilobiellum* p. 63 spp. n. Wales figs., THEOBALD & WALTON Ann. Rep. and Proc. Lancs. and Ches. Ent. Soc. 45 & 46.—*M. constrictum* sp. n. fig. Pribilof Islands, PATCH N. Amer. Fauna 46.

*Myzocallis bambucicola* p. 70, *pseudoljni* p. 71, *quercifornosanus* p. 72, *bambucifoliae* p. 73, Formosa spp. n. figs., TAKAHASHI Aphididae of Formosa pt. 1 1921.—*M. yokoyamai* sp. n. fig. Japan p. 63, ID. op. cit. pt. 2 1923.—*M. annulatus* Htg. (= *quercus* auct.) p. 243, LAING Ent. Mo. Mag. 59.

*Myzus* key p. 17, *polygoniformosanus* p. 18, *woodwardiae* p. 20, *polypodiacicola* p. 21, *anthraxonis* p. 22, *hemerocallis* p. 24, *formosartemisiae* p. 25 Formosa spp. n. figs., TAKAHASHI Aphididae of Formosa pt. 1 1921.—*M. formosanus* p. 22, *tropicalis* p. 24, *boehmeriae* p. 26, Formosa spp. n. figs., ID. op. cit. pt. 2 1923.—*M. glaucii* sp. n. England p. 103 figs., THEOBALD Ent. Mo. Mag. 59.

*Neochromaphis* gen. n. *carpini* sp. n. Tokyo p. 24, TAKAHASHI Japanese Aphididae 1 1921.

*Neophyllaphidini* subtrib. n. p. 76, TAKAHASHI Aphididae of Formosa pt. 1 1921.

*Neoschoutedenia* n. n. for *Schoutedenia* Mordw. p. 403, SCHUMACHER D. ent. Zs. 1923.

*Neothomasia* Baker n. n. for *Thomasia* Wilson p. 283, BAKER Conn. N. H. Surv. Bull. 34.

*Nippolachnini* subtrib. n. p. 80, TAKAHASHI Aphididae of Formosa pt. 1 1921.

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*Paracletus cimiciformis* biology p. 401, SCHUMACHER D. ent. Zs. 1923.

*Pemphigus longicornus* sp. n. Texas p. 327, MAXSON Conn. N. H. Surv. Bull. 34.

*Pergandeida stanilandii* sp. n. England p. 240 figs., LAING Ent. Mo. Mag. 59.

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*Phyllaphoides* gen. n., *bambucicola* sp. n. Formosa p. 75 fig., TAKAHASHI Aphididae of Formosa pt. 1 1921.

*Rhopalosiphoninus waltoni* sp. n.  
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*Rhopalosiphum* key to Formosan  
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Tetraneurini trib. n. for genera  
*Gobiashia*, *Colopha*, *Tetraneura* p. 315,  
MAXSON Conn. N. H. Surv. Bull. 34  
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*Therioaphis betulincola* Kalt. (= *Callipterus betularius* Buckt. nec Kalt.)  
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59.

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*Toxoptera* key to Formosan, *leonuri*  
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Aphididae of Formosa pt. 1 1921.—  
*T. typhae* sp. n. England p. 241 figs.,  
LAING Ent. Mo. Mag. 59.

Trifidini trib. n. for genera *Trifidaphis* and *Tullgrenia* p. 318, MAXSON  
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Vesiculaphidini subtrib. n. p. 30,  
TAKAHASHI Aphididae of Formosa  
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*Yamataphis papaveri*, sp. n. Formosa  
p. 49 fig., TAKAHASHI pt. 1  
Aphididae of Formosa 1921.

#### ALEURODIDAE.

Aleurodidae of S. America, keys,  
pp. 609–648 figs., BAKER & MOLES Rev.  
chil. Hist. nat. 25.

The Aleurodidae of Brazil, BONDAR  
Bahia 1923 183 pp. 84 figs.

Revision of the Aleurodidae of Connecticut, with keys, p. 335 figs., BRITTON Conn. N. H. Surv. Bull. 34.

(n-12519 j) Q

The Aleurodidae of Jamaica, GOWDEY Jamaica Dept. Agric. Ent. Bull. 36 pp.

*Aleurocerus* gen. n. p. 156, *luxuriosus*  
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BAKER & MOLES Rev. chil. Hist. nat.  
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*Aleuroplatus* key to S. American  
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*Aleurothrixus* key to S. American  
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Hist. nat. 25.—*A. proximans* p. 170,  
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*Dialeurodinus* key to S. American p. 615, BAKER & MOLES Rev. chil. Hist. nat. 25.—*D.*, key p. 46, *similis* p. 49, *cornutus* p. 51, *niger* p. 52, *frontalis* p. 57 Brazil spp. n. figs., BONDAR Aleur. Braz.—*D. pulcherrimus* Quaint. & Baker see *Quaintancius*.

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*Pseudaleurolobus* gen. n. p. 1155, *jaboticabae* sp. n. S. Paulo p. 1156, HEMPEL Rev. Mus. Paul. 13.

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*Trialeurodes*, key to S. American, *unadutus* p. 643, *shawundus* p. 644 spp. n. Chile figs., BAKER & MOLES Rev. chil. Hist. nat. 25.—*T. inaequalis* sp. n. France p. 339 fig., GAUTIER Ann. Soc. ent. Fr. 91.

#### Coccoidea.

Revision of Coccoidea of Connecticut, with keys, p. 346 figs., BRITTON Conn. N. H. Surv. Bull. 34.

Coccoidea of Turkestan, ARKHANGELSKAYA Trans. Turkestan Sci. Soc. 1 pp. 259–266.

A monograph of the Tachardiinae, CHAMBERLIN Bull. Ent. Res. 14 pp. 147–212 (figs.).

Mealy-bugs of economic importance in Hawaii, keys, FULLAWAY Proc. Hawaiian Ent. Soc. 5 pp. 305–321.

Indigenous Coccoidea of the British Islands, GREEN Proc. S. London Ent. & Nat. Hist. Soc. 1922–23 pp. 12–25 4 pls.

Coccoidea of Maskell collection p. 734, MACGILLIVRAY Science 57.

*Afrotachardina* subgen. n. see *Tachardina*.

*Aonidia truncata* sp. n. Queensland p. 129 fig., GREEN & LAING Bull. Ent. Res. 14.

*Apiomorpha minuta* redescribed, p. 142, BREWSTER Austr. Nat. 4 1920.

*Aspidiotus (Chrysomphalus) pinnulifera* var. n. *diversicolor* Madeira p. 96 fig., GREEN Bull. Ent. Res. 14.—*A. (Aonidiella) ritchiei* p. 125, (*Aonidiella*)

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*Asterolecanium phoenicis* sp. n. Mesopotamia p. 469 fig., GREEN Bull. Ent. Res. 13.

*Auloicerya* gen. n. for *Palaeococcus australis* Mask. p. 22, *acaciae* sp. n. W. Australia p. 26 fig., MORRISON (H. & E.) Proc. U. S. Nat. Mus. 62 art. 17 1923.

*Austrotachardia* gen. n. for *Tachardia angulata* Frogg. p. 194 fig., key p. 195, CHAMBERLIN Bull. Ent. Res. 14.

*Austrotachardiella* subgen. n. see *Tachardiella*.

*Callipappus* tentative key p. 43, MORRISON (H. & E.) Proc. U. S. Nat. Mus. 62 art. 17 1923.

*Ceronema acaciae* sp. n. Egypt p. 13 fig., HALL Egypt Min. Agric. Bull. 36.

*Ceroplastes circumdatus* sp. n. Br. Guiana p. 95 fig., GREEN Bull. Ent. Res. 14.

*Chionaspis graminis* var. n. *aegyptiaca*, Egypt p. 20, HALL Egypt Min. Agric. Bull. 36.

*Cocomytilus isis* sp. n. Egypt p. 21 fig., HALL t.c.

*Dinaspis veitchi* sp. n. Fiji p. 123 fig., GREEN & LAING Bull. Ent. Res. 14.

*Drosicha levis* see *Nodulicoccus*.

*Ericerus pela* description and bionomics, pp. 393–406 figs., KUWANA Phil. J. Sci. 22.

*Eriococcus palustris* sp. n. California p. 57, DODDS J. Ent. & Zool. 15.—*E. parvispinus*, sp. n. Florida p. 169 figs., CHAFFIN Qtrly. Bull. Florida State Pl. Bd. 7.

*Eriopeltis festucae* Boy. ♂ & nymph described p. 212 figs., lichtensteini Sign. distinct sp. p. 213 figs., GREEN Ent. Mo. Mag. 59.

*Eucalymnatus*, key p. 41, *gracilis* subsp. n. *nichtheroyensis* p. 36, *spinulosus* p. 37, *magarinosi* p. 38, *hempeli* p. 39 spp. n. Brazil, DA COSTA LIMA Arch. Esc. sup. Agric. & Med. vet. Nictheroy 7.—*E. tessellatus* in Hungary pp. 55–73, 141, JABLONOWSKI Allatt. Közlem. 16 1917.

*Ferrisia* gen. n. for *Pseudococcus virgatus* Ckll. p. 311, FULLAWAY Proc. Hawaiian Ent. Soc. 5.

*Fiorinia* (*Adiscofiorinia*) *pygosema* sp. n. Tanganyika Terr. p. 124 fig., GREEN & LAING Bull. Ent. Res. 14.

*Gossyparia mannifera* Hardw. identity p. 697, GREEN Ann. Mag. N. H. (9) 12.

*Gymnaspis bilobis* sp. n. Tanganyika Terr. p. 130 fig., GREEN & LAING Bull. Ent. Res. 14.

*Halimococcus thebaiae* sp. n. Egypt p. 2 fig., HALL Egypt Min. Agric. Bull. 36.

*Icerya insulans* sp. n. Brazil p. 510, LUEDERWALDT & FONSECA Rev. Mus. Paul. 13.

*Lachnodiella acritocera* sp. n. Florida p. 170 figs., CHAFFIN Qtrly. Bull. Florida State Pl. Bd. 7.

*Lecanioidiaspis tapiriae* sp. n. Gulf of California p. 316 fig., FERRIS & KELLY Proc. Calif. Acad. Sci. 12.

*Lecanium (Saissetia) cerei* sp. n. Madeira p. 93 fig., GREEN Bull. Ent. Res. 14.—*L. viticis* sp. n. Argentina p. 123 fig. MORRISON Proc. Ent. Soc. Wash. 25.—*L. hesperidum* biology pp. 191–246 fig., DINGLER Zs. angew. Ent. 9.

*Lecanopsis formicarum* eggs p. 214, GREEN Ent. Mo. Mag. 59.

*Lepidosaphes bicuspis*, p. 22, *sacchari*, p. 23, spp. n. Egypt figs., HALL Egypt Min. Agric. Bull. 36.—*L. (Cocomytilus) halli*, sp. n. Egypt p. 63 fig., GREEN Egypt Min. Agric. Bull. 36.—*L. (Cocomytilus) lantanae* sp. n. Argentina p. 131 fig., GREEN & LAING Bull. Ent. Res. 14.—*L. espinosai* sp. n. Chile p. 33 fig., PORTER An. Zool. aplic. 7 1920.

*Leucaspis* in Japan pp. 319–324 fig., KUWANA Dobuts. Z. 35.

*Llaveia callitri* sp. n. N.S.W. p. 162, FROGGATT Forest Insects of Australia 1923.

*Metatachardia* subgen. n. see *Tachardia*.

*Monophlebulus* key p. 18, *crawfordi* Mask. redescribed p. 6, *comperi* p. 12 Brisbane, *subterraneus* p. 14 Adelaide spp. n. figs., MORRISON (H. & E.) Proc. U. S. Nat. Mus. 62 art. 17 1923.

*Monophlebus (Drosicha) contrahens* redescribed p. 168, *phyllanthi* sp. n. Ceylon p. 169, GREEN Ann. Mag. N. H. (9) 12.

*Nodulicoccus* gen. n. for *Drosicha levis* Mask. p. 19, MORRISON (H. & E.) Proc. U. S. Nat. Mus. 62 art. 17 1923.

*Ostiraspis* gen. n. p. 24, *halteata* sp. n. Egypt p. 25 fig., HALL Egypt Min. Agric. Bull. 36.

*Palaeococcus australis* see *Auloicerya*.

*Phenacoccus peyerimhoffi* sp. n. Algeria p. 152 fig., VAYSSIÈRE Bull. Soc. ent. Fr. 1923.—*P. interruptus* p. 215, *wistariae* spp. n. Britain p. 217 figs., GREEN Ent. Mo. Mag. 59.—*P. latipes* p. 89, *madeirensis* p. 90 Madeira spp. n. figs., GREEN Bull. Ent. Res. 14.—*P. cyrenaicus* sp. n. Cyrenaica p. 209 fig., FERRIS Bull. Lab. Zool. Portici 16.

*Physokermes unifasciatus* sp. n. Turkestan p. 265, ARKHANGELSKAYA Trans. Turkestan Sci. Soc. 1.

*Pinnaspis pattersoni* sp. n. Gold Coast p. 124 fig., GREEN & LAING Bull. Ent. Res. 14.—*P. zillae* sp. n. Egypt p. 27 fig., HALL Egypt Min. Agric. Bull. 36.

*Platycelostoma*, gen. n. for *Coelostomidia compressa* Mask. p. 35 MORRISON (H. & E.) Proc. U.S. Nat. Mus. 62 art. 17 1923.

*Pseudaonidia marquesi* sp. n. Brazil p. 530, COSTA LIMA in AZEVEDO MARQUES Chac. e Quin. 28.—*P. subtesserata* sp. n. Jamaica p. 127 fig., GREEN & LAING Bull. Ent. Res. 14.

*Pseudococcus*, key p. 209, *citrioides* sp. n. Cyrenaica p. 208 fig., FERRIS Bull. Lab. Zool. Portici 16.—*P. heterospinus* p. 91, *artemisiae* p. 92 spp. n. figs. Madeira, GREEN Bull. Ent. Res. 14.—*P. trispinosus* sp. n. Egypt p. 5, fig. HALL Egypt Min. Agric. Bull. 36.—*P. nipae* in Hungary pp. 232–247, 339, JABLONOWSKI Allatt. Közlem. 15 1916.—*P. citri* sex ratio and oogenesis p. 163, SCHRADER Zs. indukt. Abstammungslehre 30.

*Pulvinaria daveyi*, sp. n. Victoria p. 162, FROGGATT Forest Insects of Australia 1923.—*P. chrysanthemi* p. 15, *discoidalis* p. 16, *retamae* p. 17 Egypt spp. n. fig., HALL Egypt Min. Agric. Bull. 36.

*Ripersia cellulosa* p. 7, *imperatae*, *internodii* p. 8, *phragmitis* p. 10 Egypt spp. n. fig., HALL Egypt Min. Agric. Bull. 36.

*Tachardia* key p. 165, *meridionalis* Australia p. 167, *greeni* Philippines p. 169, *ebrachiata* India p. 170 spp. n. figs., *Metatachardia* subgen. n. p. 172, CHAMBERLIN Bull. Ent. Res. 14.

*Tachardiella* key p. 175 *larreeae* f. n. *californica* California p. 179, *glomerella* f. n. *baccharidis* Texas p. 181, *ferrisi* Mexico p. 183, *texana* Texas p. 186 spp. n., (*Austrotachardiella* subgen. n. p. 187, key p. 188) figs., CHAMBERLIN Bull. Ent. Res. 14.

*Tachardina* keys pp. 201 & 204 (*Afrotachardina* subgen. n. p. 201), *brachysetosa* sp. n. Uganda p. 203, *ternata* India, *lobata* Ceylon spp. n. p. 208 figs., CHAMBERLIN Bull. Ent. Res. 14.

*Targionia quohogiformis*, sp. n. Florida p. 167 figs., MERRILL Qtrly. Bull. Florida State Pl. Bd. 7.—*T. longiloba* sp. n. Egypt p. 28 fig., HALL Egypt Min. Agric. Bull. 36.

*Trionymus crini* p. 11, *indecisus* p. 12, spp. n. Egypt figs., HALL t. c.

#### TRIASSOCORIDAE.

†*Triassocoris ovalis* p. 494, *grandis* spp. n. Upper Triassic, Queensland p. 495 figs., TILLYARD Proc. Linn. Soc. N. S. W. 48.

#### ANOPLURA.

Notes on Hungarian Anoplura, DUDICH Rovart. L. 26 p. 59.

Contributions toward a monograph of the sucking lice, FERRIS Stanford Univ. Pubns. Biol. Sci. 2 pt. 1 1919 pp. 1–51, pt. 2 1921 pp. 59–133, pt. 4 1923 pp. 183–270 (figs.).

Anoplura of the Pribilof Islands, McATEE N. Amer. Fauna 46 p. 142.

Revision of Hemiptera Parasitica of Connecticut, with keys, p. 17 figs., OSBORN Conn. N. H. Surv. Bull. 34.

*Doxophthirus acinetus* sp. n. Madras p. 101, WATERSTON Bull. Ent. Res. 14.

*Echinophthirius fluctus* see *Proechinophthirius*.

*Enderleinellus malaysianus* Malaya p. 12, *menetensis* Siam p. 14, *larisci* Borneo p. 17, *venezuelae* Venezuela p. 25, *platyspicatus* Ceylon p. 26, *dremomydis* China p. 29, *nannosciuri* Java p. 30, *zonatus* B.E. Africa p. 32, *sciurotomasiasis* China p. 35, *euxeri* p. 37, *heliosciuri* p. 40 B.E. Africa, *marmotae* S. Dakota p. 47 spp. n. figs., FERRIS Stanford Univ. Pubns. Biol. Sci. 2 1919.—*E. uncinatus* see *Microphthirus*.

*Euliognathus americanus* sp. n. Paraguay p. 148, EWING J. Wash. Acad. Sci. 13.

*Hoplopleura angulata* Venezuela p. 73, *malaysiana* Malaya p. 79, *chrotomydis* Philippines p. 81, *oenomydis* B.E. Africa p. 82, *apomydis* Philippines p. 84, *sukenyae* B.E. Africa p. 86, *laticeps* W. Africa p. 92, spp. n., *enormis* subsp. n., *pelomydis* p. 96, *mylomydis* p. 97 B.E. Africa; *merionidis* China p. 98, *biseriata* Orange Free State p. 103, *cryptica* Uganda p. 104, *vepricula* B.E. Africa p. 105, *erismata* Siam p. 113, *distorta* China p. 115, *phaiomysidis* Kashmir p. 120, *oxymycteri* Peru p. 122, *reducta* Argentina p. 124, *audax* Ecuador p. 125, *alata* Patagonia p. 127, *disgrega* Bolivia p. 132, spp. n. figs., FERRIS Stanford Univ. Pubns. Biol. Sci. 2 1921.—*H. somereni* sp. n. Kenya Colony p. 99, WATERSTON Bull. Ent. Res. 14.—*H. atra* see *Pterophthirus*.

*Microphthirus* gen. n. for *Enderleinellus uncinatus* p. 49 fig., FERRIS Univ. Stanford Pubns. Biol. Sci. 2 1919.

*Neohaematopinus sciurinus* subsp. n., *griseicolus* California p. 248, *syriacus* N. Syria & Asia Minor p. 250, *suhelicus*, *keniae* B.E. Africa, *petauristae* Kashmir p. 258, *batuanae* Batu Islands p. 261, *marmotae* Montana p. 268, spp. n. figs., FERRIS Stanford Univ. Pubns. Biol. Sci. 2 1923.

*Pediculus capitidis, humanus, schäffi* larval stages pp. 163–168, OUDEMANS Ent. Ber. Ned. Ent. Vereen 6.

*Phthirpediculus* gen. n., *propitheci* sp. n. Madagascar p. 149, EWING J. Wash. Acad. Sci. 13.

*Polyplax taterae* p. 198, *biseriata* p. 199, B.E. Africa, *gerbilli* Khartum p. 203, *chinensis* China p. 209, *phthisica* p. 223 B.E. Africa, *abyssinica* Uganda p. 230, *insulsa* p. 231 Natuna Islands, *asiatica* Burma p. 233 spp. n. figs., FERRIS Stanford Univ. Pubns. Biol. Sci. 2 1923.

*Proechinophthirus* gen. n. for *Echinophthirius fluctus* Ferris p. 149, EWING J. Wash. Acad. Sci. 13.

*Proenderleinellus* gen. n., *africanus* sp. n. E. Africa p. 147, EWING t.c.

*Pterophthirus* gen. n. for *Hoplopleura atra* Ferris p. 147, EWING t.c.

## THYSANOPTERA.

Key to broad-headed Trichothripinae p. 289, KARNY Treubia 3.

Lists of Australian & Papuan Thripidae, KELLY Vict. Nat. 40 pp. 49–57 figs.

A summary of the Thysanoptera with special notice of Chilean species p. 21, PORTER An. Zool. aplic. 7 1920.

Biology of German Thysanoptera, PRIESNER Biol. Tiere Deutschlands Teil 29 10 pp. 7 figs.

Immature stages of Thysanoptera, descriptions, keys, PRIESNER Sitz-Ber. Ak. Wiss. Wien 132 pp. 1–18 figs.

List of E. Prussian Thysanoptera, PRIESNER Schr. physik. Ges. Königsberg 57 1917 pp. 50–54.

The metamorphosis of the Thysanoptera, TAKAHASHI Doubuts. Z. 33 1921 pp. 80–85 2 figs.

A First Contribution on Dutch Thysanoptera, VAN ECKE Nat. Verh. Holl. Mij. Wetens. 9.

Corrections to above paper on Dutch Thysanoptera, VAN ECKE Ent. Ber. 6 pp. 135–136.

Synopsis and catalogue of the Thysanoptera of N. America, translation of Karny's keys, bibliography of recent publications, WATSON Florida Agric. Expt. Sta. Tech. Bull. **168** 100 pp.

*Aeolothrips priesneri* sp. n. Rumania p. 72, KNECHTEL Bull. Acad. Roumaine **8**.

*Anaphothrips badius* var. n. *pectens* Oxford p. 57, BAGNALL Ent. Mo. Mag. **59**.—*A. floralis* sp. n. Indo-China p. 109, KARNY J. Siam. Soc. **16**.—*A. rubica* sp. n. Sudan p. 28, KARNY Anz. Ak. Wiss. Wien **57** 1920.—*A. antilope* sp. n. Egypt p. 63, PRIESNER Ent. Mitt. **12**.

*Astrothrips tumiceps* sp. n. Java p. 331 fig., KARNY Treubia **3**.

*Austrothrips cochinchinensis* sp. n. Siam & Indo-China p. 113, KARNY J. Siam Soc. **16**.

*Brachythrips bogoriensis* sp. n. Java p. 285, KARNY Treubia **3**.

*Bregmatothrips ramakrishnae* India p. 625, *saccharicola* Africa p. 626 spp. n., BAGNALL Ann. Mag. N. H. (9) **12**.

*Chelaeothrips* gen. n. near *Cecidothrips*, *annamensis* sp. n. Annam p. 374 fig., KARNY Treubia **3**.

*Chirothrips floridensis* var. n. *catchingsi* Louisiana p. 76, WATSON Florida Agric. Expt. Sta. Tech. Bull. **168**.

*Coryphothrips* gen. n. near *Leptothrips* p. 340, *coniceps* p. 341 Kuala Lumpur *trochiceps* (type) p. 347 Siam, spp. n., figs., KARNY Treubia **2**.

*Cryptothrips pusillus* sp. n. Kuala Lumpur p. 344 (fig.), KARNY Treubia **3**.

*Dactylothrips* gen. n. p. 629, *australis* sp. n. Australia p. 630, BAGNALL Ann. Mag. N. H. (9) **12**.

*Dendrothripoides* gen. n. p. 624, *ipomeae* sp. n. India p. 625, BAGNALL t.c.

*Diaphorothrips hamipes* sp. n. Java p. 296 fig., KARNY Treubia **3**.

*Dinothrips kemneri* p. 294, *anodon* p. 295 Java spp. n. figs., KARNY Treubia **3**.

*Docessissophothrips adiaphorus* sp. n., Java p. 328 fig., KARNY Treubia **3**.

*Dolerothrips uncilumbis* Java p. 289, *trachypogon* Passie Taloe Is. p. 309 spp. n. figs., KARNY Treubia **3**.

*Dolichothrips giraffa* sp. n. Sudan p. 28, KARNY Anz. Ak. Wiss. Wien **57** 1920.

*Eothrips laticeps* p. 117, *schoutentiae* p. 112, *hyalopterus* p. 125 spp. n. fig., Indo-China, KARNY J. Siam Soc. **1**.

*Erythrothrips durango* sp. n. Mexico p. 74, WATSON Florida Agric. Expt. Sta. Tech. Bull. **168**.

*Frankliniella priesneri* sp. n. Africa p. 627, BAGNALL Ann. Mag. N. H. (9) **12**.—*F. vicina* Indo-China p. 94, *persetosa* Siam p. 97 spp. n., KARNY J. Siam Soc. **16**.—*F. dampfi* sp. n. Egypt p. 64, PRIESNER Ent. Mitt. **12**.—*F. bispinosa* a subsp. of *tritici* Fitch p. 9, WATSON Florida Ent. **7**.

*Gynaikothrips ebneri* sp. n. Sudan p. 28, KARNY Anz. Ak. Wiss. Wien 57 1920.—*G. pallicerus* Kalao Toea Is. p. 315, *leeuweni* Saleier Is. p. 318, *lividicornis* Kalao Toea Is. and Bone-rate Is. p. 322, *siamensis* Siam p. 349, *daetymon* Saigon p. 371 spp. n. figs., KARNY Treubia **3**.—*G. fuscipes* p. 130, *primitivus* p. 134 fig., *maximus* p. 138 Indo-China, *rectigenis* Siam p. 140, spp. n., KARNY J. Siam Soc. **16**.—*G. satanas* p. 105, *mikaniae* p. 108 spp. n. Surinam figs., PRIESNER Tijdschr. Ent. **66**.—*G. williamsi* sp. n. Egypt p. 128, KARNY Bull. Soc. R. Ent. Egypte 1922.

*Haplothrips orlando* see *Treherniella*.

*Heliothrips haemorrhoidalis* var. n. *angustior*, *venustulus* sp. n. Surinam p. 89 fig., PRIESNER Tijdschr. Ent. **66**.

†*Hemithripidae* fam. n., *Hemithrips* gen. n. p. 37, *femoralis*, *simplex*, *antiquus* spp. n. Baltic amber p. 38, BAGNALL Ent. Mo. Mag. **59**.

*Heterothrips mexicanus* sp. n. Mexico p. 75, WATSON Florida Agric. Expt. Sta. Tech. Bull. **168**.

*Hindsiana catchingsi* sp. n. Louisiana p. 80, WATSON Florida Agric. Expt. Sta. Tech. Bull. **168**.

*Hoplandrothrips xanthopoides* female described p. 58, WATSON Florida Ent. **6**.—*H. flavipes* sp. n. E. Afr. p. 628, BAGNALL Ann. Mag. N. H. (9) **12**.

*Isoneurothrips parvispinus* sp. n.  
Siam p. 106 KARNY J. Siam Soc. **16**.

*Karnyia* gen. n. p. 6, *weigeli* sp. n.  
New Orleans p. 7, WATSON Florida Ent.  
**6** 1922.

*Kleothrips athletes* sp. n. Java p. 355  
fig., KARNY Treubia **3**.

*Lamillothrips* gen. n. p. 630, *typicus*,  
*pennicollis* spp. n. Gold Coast p. 631,  
BAGNALL Ann. Mag. N. H. (9) **12**.

*Leeuwenia caelatrix* Kuala Lumpur  
p. 368, *aculeatrix* Saigon p. 370 spp. n.  
figs., KARNY Treubia **3**.

*Liophloeothrips* (?) *acaciae* sp. n.  
Egypt p. 117, PRIESTNER Ent. Mitt. **12**.

*Liothrips bibbyi* Mexico p. 79, *perseae*  
Honduras p. 80, spp. n., WATSON  
Florida Agric. Expt. Sta. Tech. Bull.  
**168**.—*L. urichi* sp. n. Trinidad p. 160,  
KARNY Ann. Mag. N. H. (9) **12**.

*Macrophthalmothrips quadricolor* sp. n.  
Celebes p. 278 fig., KARNY Treubia **3**.

*Megathrips lativentris* viviparous pp.  
227–232, JOHN Ent. Mitt. **12**.

†*Melanothrips varicornis*, *annulicornis* spp. n. Baltic amber p. 36, BAGNALL Ent. Mo. Mag. **59**.

*Mesothrips ustulatus* p. 146, *vitripennis* p. 149 Indo-China spp. n.,  
KARNY J. Siam Soc. **16**.

*Neoeurhynchothrips* gen. n. p. 77,  
*cubensis* sp. n. Cuba p. 78, WATSON  
Florida Agric. Expt. Sta. Tech. Bull.  
**168**.

*Neohegeria zizyphi* sp. n. India  
p. 629, BAGNALL Ann. Mag. N. H. (9)  
**12**.

*Oxythrips cannabensis* p. 74, *dentatus*  
p. 123, spp. n., *physapus* var. n. *quadri-*  
*setosus* p. 125 Rumania figs., KNECHTEL  
Bull. Acad. Roumaine **8**.—*O.*, key  
p. 116, *inopinatus* sp. n. Austria p. 115,  
PRIESTNER Wiener ent. Ztg. **40**.

*Phloeoethrips*, key p. 96, *reynei* sp. n.  
Surinam p. 93 fig., PRIESTNER Tijdschr.  
Ent. **66**.

*Physothrips vitticornis* sp. n. Siam &  
Indo-China p. 103, KARNY J. Siam Soc.  
**16**.—*P. thunbergiae* sp. n. Saleier Is.  
p. 302 fig., KARNY Treubia **3**.—*P.*  
*flavidulus* sp. n. India p. 628, BAGNALL  
Ann. Mag. N. H. (9) **12**.

*Pygothrips metulicauda* sp. n. Java  
p. 336 fig., KARNY Treubia **3**.

*Retithrips javanicus* sp. n. Java p. 364  
fig., KARNY Treubia **3**.

†*Rhipidothripoides abdominalis* sp. n.  
Baltic amber p. 36, BAGNALL Ent. Mo.  
Mag. **59**.

*Rhynchothrips aethiops* sp. n. Sudan  
p. 28, KARNY Anz. Ak. Wiss. Wien **57**  
1920.

*Scirtothrips angusticornis* sp. n. Siam  
p. 91, KARNY J. Siam Soc. **16**.

*Sedulothrips hubbelli* sp. n. Honduras  
p. 76, WATSON Florida Agric. Expt.  
Sta. Tech. Bull. **168**.

†*Stenurothrips brevisetis* sp. n. Baltic  
amber p. 37, BAGNALL Ent. Mo. Mag.  
**59**.

*Sympyothrips fuscatus* sp. n. Java  
p. 377 fig., KARNY Treubia **3**.

*Taeniothrips longistylus* sp. n. Siam  
p. 99, KARNY J. Siam Soc. **16**.—*T.*  
*taeniatus* Saleier Is. p. 300 fig., KARNY  
Treubia **3**.—*T. albidicornis* sp. n.  
Rumania p. 73, KNECHTEL Bull. Acad.  
Roumaine **8**.

*Thrips*, larvae of certain species pp.  
16–20 fig., PRIESTNER Zs. Schädlings-  
bekämpfung **1**.—*T. klapaleki* development,  
figs., pp. 215–222, PRIESTNER  
SitzBer. Ak. Wiss. Wien Abt. I **130**  
1921.—*T. microchaetus* Karny a good  
species, *microcephalus* sp. n. Egypt p.  
116, PRIESTNER Ent. Mitt. **12**.—*T. flavus*  
var. n. *microchaetus* Sudan p. 27,  
KARNY Anz. Ak. Wiss. Wien **57** 1920.—  
*T. euphorbiae* sp. n. Rumania p. 75,  
KNECHTEL Bull. Acad. Roumaine **8**.—  
*T. menyanthidis*, *adamsoni* p. 58, *ful-*  
*vipes*, *crassicornis* p. 59, *debilis* p. 60  
spp. n. England, BAGNALL Ent. Mo.  
Mag. **59**.

*Treherniella* gen. n. for *Haplothrips*  
orlando Watson & Osborn p. 81, WATSON  
Florida Agric. Expt. Sta. Tech. Bull.  
**168**.

*Trichothrips recticeps* sp. n. Sudan  
p. 28, KARNY Anz. Ak. Wiss. Wien **57**  
1920.

*Zygothrips wyomingensis* sp. n. Wy-  
oming p. 82, WATSON Florida Agric.  
Expt. Sta. Tech. Bull. **168**.—*Z. florid-*  
*ensis* sp. n. Florida p. 21, WATSON  
Florida Ent. **6** 1922.

### PSOCOPTERA.

Monograph of New Zealand Psocoptera, keys to families and subfamilies, TILLYARD Trans. N. Z. Inst. 54 pp. 170-196.

On the oecology of the Corrodentia, TAKAHASHI Dobuts. Z. 33 1921 pp. 173-180 2 figs.

*Caecilius* key, *zelandicus* p. 188, *flavistigma*, *apicipunctatus* p. 189, *brunnellus* p. 190, spp. n. N. Zealand fig., TILLYARD t.c.—*C. altus* sp. n. Chile p. 444 fig., NAVAS Rev. chil. Hist. nat. 25.

*Dorypteryx astizi* sp. n. Buenos Aires p. 118 figs., BRÈTHES Bull. Soc. ent. Fr. 1923.

*Ectopsocus congener* sp. n. N. Zealand p. 192 fig., TILLYARD t.c.

*Maoripsocus* gen. n. *semifuscatus* p. 191 sp. n. N. Zealand fig., TILLYARD t.c.

*Mesopsocus* gen. n. type *unipunctatus* Müller, *stigmaticus* sp. n. N. Zealand p. 185, fig., TILLYARD t.c.

*Oxypsocus* gen. n. p. 178, *hamiltoni* sp. n. N. Zealand p. 179 fig., TILLYARD t.c.

*Philotarsopsis* gen. n. *delicatus* sp. n. N. Zealand p. 182 fig., TILLYARD t.c.

*Philotarsus*, key p. 180, *maculatus*, *guttatus* spp. n. N. Zealand p. 181 figs., TILLYARD t.c.

*Zelandopsocus* gen. n. p. 183, *formosellus* sp. n. N. Zealand p. 184 fig., TILLYARD t.c.

### MALLOPHAGA.

Life-history and habits of Mallophaga, BARBER Pprs. Mich. Acad. Sci. 1921 pp. 391-395.

Mallophaga of the Pribilof Islands p. 141, FERRIS N. Amer. Fauna 46.

Mallophaga feeding on blood, p. 231, KOTLÁN Zool. Anz. 56.

Mallophaga of the Shackleton-Rowett Expedition 1921-1922, WATERSTON Trans. Ent. Soc. 1923 p. 288.

*Lipeurus*, eggs pp. 20-23 (fig.), WANDOLLECK Zs. Schädlingsbekämpfung 1.

*Philopterus waterstoni* p. 196, *castaneus* p. 246, spp. n. Spain, FRESCA Bol. Soc. esp. Hist. nat. 23.

### ISOPTERA.

The habits of the Termites of Barkuda, ANNANDALE Rec. Ind. Mus. 25 pp. 233-251.

Nests of *Eutermes* and *Microtermes* p. 403 fig., BATHELIER Ann. Sci. nat. (Zool.) (10) 6.

Fungus growth in nests of *Eutermes matangensis* and *Microtermes incertus* Saïgon pp. 129 (176), 430 (177), BATHELIER C.R. Acad. Sci. 176 & 177.

Biological notes on the Termites of the Panama Canal Zone, DIETZ & SNYDER J. Agric. Res. 26 pp. 279-302 8 pls.

The Termites of Barkuda Island, SILVESTRI Rec. Ind. Mus. 25 pp. 221-232 (fig.).

*Anoplotermes parvus* sp. n. Canal Zone Panama p. 130, SNYDER Proc. Ent. Soc. Wash. 25.

*Apicotermes occultus* nests, Congo p. 409, STUMPER C.R. Acad. Sci. 177.—*A. occultus* nests p. 52, REICHENSPERGER Bull. Soc. Nat. Luxembourg 17.

*Capritermes obtusus* sp. n. p. 229, *obtusus* var. n. *abbreviatus* p. 231 figs. Barkuda Is., SILVESTRI Rec. Ind. Mus. 25.—*C. bodkini* sp. n. p. 312, *bodkini* var. n. *modestior* p. 315 Br. Guiana figs., SILVESTRI Zoologica 3.

*Coptotermes sedulus* sp. n. Australia p. 40 figs., HILL Proc. Linn. Soc. N. S. W. 48.—*C. sinabangensis* sp. n. fig. Simalur Is. (Sumatra) p. 7, OSHIMA Capita Zool. 2 pt. 3.

*Cubitermes ugandensis* sp. n. Uganda p. 191 fig., FULLER Ann. Mag. N. H. (9) 11.

*Eurytermes assmuthi* var. n. *modestior* Barkuda Is. p. 228 fig., SILVESTRI Rec. Ind. Mus. 25.

*Euscaiotermes* subgen. n. see *Odontotermes*.

*Eutermes fieldi* p. 43 figs., *tribulus* p. 46 spp. n. Australia, HILL Proc. Linn. Soc. N. S. W. 48.

*Glyptotermes corniceps* sp. n. Porto Rico p. 92 fig., SNYDER Proc. Ent. Soc. Wash. 25.

*Hamitermes excellens* sp. n. Br. Guiana p. 309 fig., SILVESTRI Zoologica 3.

*Hirtitermes sinzbangensis* sp. n. fig. Simalur Is. (Sumatra) p. 21, OSHIMA Capita Zool. 2 pt. 3.

*Hospitalitermes flavoantennaris* sp. n. fig. Simalur Is. (Sumatra) p. 18, OSHIMA Capita Zool. 2 pt. 3.

*Leucotermes lucifugus* discussion of reproductive forms pp. 160–164, 3 figs., FEYTAUD Proc. Soc. Linn. Bordeaux 72 1920.

*Mastotermes darwinensis*, abdominal structure pp. 85–93 figs., CRAMPTON Bull. Brooklyn Ent. Soc. 18.

*Microceroterpes annandalei* sp. n. Barkuda Is. p. 225 fig., SILVESTRI Rec. Ind. Mus. 25.

*Microtermes tenuis* sp. n. fig. Simalur Is. (Sumatra) p. 11, OSHIMA Capita Zool. 2 pt. 3.

*Mirotermes panamaensis* sp. n. Canal Zone Panama p. 129, SNYDER Proc. Ent. Soc. Wash. 25.

*Nasutitermes jacobsoni* p. 13, *simaluris* p. 15 Simalur and Pulu Babi Is. (Sumatra) spp. n. figs., OSHIMA Capita Zool. 2 pt. 3.

*Neotermes medioides* sp. n. Simalur Is. (Sumatra) p. 3 fig., OSHIMA t.c.

*Odontotermes* (*Euscaiotermes* subgen. n. p. 221) *primus* sp. n. p. 221, *obesus* var. n. *oculatus* p. 224 Barkuda Is. figs., SILVESTRI Rec. Ind. Mus. 25.—*O. simalurensis* sp. n. Simalur Is. (Sumatra) p. 8 fig., OSHIMA Capita Zool. 2 pt. 3.

*Orthognathotermes wheeleri* sp. n. Canal Zone Panama p. 129 fig., SNYDER Proc. Ent. Soc. Wash. 25.

*Reticulitermes chinensis* sp. n. China p. 107 figs., SNYDER J. Wash. Acad. Sci. 13.

*Syntermes parallelus* sp. n. Br. Guiana p. 318 fig., SILVESTRI Zoologica 3.

*Termes* (*Odontotermes*) *kibarensis* sp. n. Uganda p. 192, FULLER Ann. Mag. N. H. (9) 11.

## EMBIOPTERA.

Ecological observations on Embiidinae, FRIEDERICHS Capita Zool. 2 pt. 1, 29 pp. figs.

Embioptera of W. Australia, TILLYARD J. R. Soc. W. Austr. 9 p. 61 figs.

*Anisembia* revised p. 341, *sini* sp. n. p. 346 figs. Mexico, CHAMBERLIN Proc. Cal. Acad. Sci. 12.

*Oligotoma hardyi* redescription p. 63, *glauerti* sp. n. W. Australia p. 64 figs., TILLYARD, J. R. Soc. W. Austr. 9.

*Ptilocerembia* gen. n., *roepkei* sp. n. Java, Sumatra p. 24 fig., FRIEDERICHS Capita Zool. 2 pt. 1.

## PLECOPTERA.

Persistence of larval tracheo-branchia in adult Plecoptera, LESTAGE Bull. Soc. ent. Belg. 5 pp. 63–78.

Respiratory system of Perlaria, p. 350, LESTAGE Ann. Biol. lacustre 12.

Perlidae in Zürich Alps pp. 402–406, RIS Mitt. Entomologia Zürich 6.

Keys to families of Perlaria, pp. 199, 204, TILLYARD Trans. N. Z. Inst. 54.

*Anacroneuria proxima* Costa Rica, Mexico, *pictipes* Guiana p. 21, *plani-collis* Mexico, Costa Rica, *expansa* Guatamala p. 22, *acutipennis* Volcano Chiriqui, *ochracea* Mexico, *laminata* Rio Grande do Sul p. 23 spp. n., Klapalek Ann. Soc. ent. Belg. 63.

*Brachycercus* synonymy p. 515, CAMPION Ann. Mag. N. H. (9) 11.

*Capnia takahashii* p. 6, *japonica* p. 7 spp. n. Japan figs., OKAMOTO Bull. Agr. Expt. Sta. Chosen 1 1922.

*Chloroperla praetexta* Moupin p. 25, *lunigera* Irkutsk, *stenoptila* Japan p. 26, *pusilla* sine loco, *lugens* Steiermark p. 27, *irregularis* ? Texas, *holochlora* Georgia p. 28 spp. n., Klapalek Ann. Soc. ent. Belg. 63.

*Eucapnopsis* gen. n. (near *Capnia*) p. 8, *stigmatica* p. 9, *4-segmentata* p. 10 spp. n. Japan figs., OKAMOTO Bull. Agr. Expt. Sta. Chosen 1 1922.

*Isoperla bellona* Banks and *ventralis* Banks see *Megahelus*.

*Isopteryx rostellata* Irkutsk, *oculata* Trenton Falls spp. n. p. 29, Klapalek Ann. Soc. ent. Belg. 63.

*Leptoperla grandis* Hudson see *Mega-leptoperla*.—*L. confusa* Hare type of *Zelandobius* gen. n., p. 205, *fulvescens* Hare type of *Nesoperla* gen. n. p. 208, TILLYARD Trans. N. Z. Inst. 54.

*Leuctra cercia* p. 37, *forficularis*, *abdominalis* p. 39, *nipponica* p. 40 spp. n. Japan figs., OKAMOTO Bull. Agr. Expt. Sta. Chosen 1 1922.—*L. bradleyi* p. 257, *biloba* p. 258, *carolinensis* p. 258, *duplicata* p. 260, *decepta* p. 260, *glabra* p. 261, *hamula* p. 261, *infuscata* p. 262, *sibleyi* p. 262, *triloba* p. 263, *truncata* p. 263, spp. n. N. America figs., CLAASSEN Can. Ent. 55.

*Megahelus* gen. n. (near *Perlinella*) for *Isoperla bellona* Banks and *I. ventralis* Banks p. 24, Klapalek Ann. Soc. ent. Belg. 63.

*Megaleptoperla* gen. n. for *Leptoperla grandis* Hudson p. 204, venation p. 205, TILLYARD Trans. N. Z. Inst. 54.

*Nemoura glabra* p. 281, *divergens*, *biloba*, *bifurcata* p. 282, *californica*, *flexura*, p. 284, *cornuta*, *frigida*, *delicatula* p. 285, *columbiana*, *producta*, *nevadensis* p. 286, *washingtoni*, *californiensis* p. 287, *interrupta*, *oregonensis*

p. 288, *trispinosa*, *serrata*, *prolongata* p. 289, *rotunda*, *truncata* p. 290, *punctipennis* p. 291 spp. n. N. America figs., CLAASSEN Can. Ent. 55.

*Nemura* (*Nemura*) *papilla*, (*Amphineura*) *sagittata* p. 22, *10-ceta* p. 23, *flavostigma* p. 24, *zonata* p. 25, *longispina* p. 26, *pentagona* p. 27, (*Protone-mura*) *nohira* p. 29, *chinonis* p. 30, *longicerca* p. 31, *jezoensis* p. 32 spp. n. Japan figs., OKAMOTO Bull. Agr. Expt. Sta. Chosen 1 1922.

*Nepheloptynx schoenmundi* sp. n. Westphalia p. 15 figs., MERTENS Arch. Natg. Abt. A 89 Heft 2.—*N. nebulosa* bionomics p. 55, LESTAGE Bull. Soc. ent. Belg. 5.

*Nesoperla* gen. n. for *Leptoperla fulvescens* Hare p. 208, key, *howesi* p. 209, *spiniger* p. 210, *trivacuata* p. 211 spp. n. N. Zealand figs., TILLYARD Trans. N. Z. Inst. 54.

*Notonemoura* gen. n. *latipennis* sp. n. N. Zealand p. 215 fig., TILLYARD t.c.

*Obipteryx* gen. n. (near *Rhabdio-pteryx*) p. 16, *femoralis* p. 17, *zonata* p. 18 spp. n. Japan figs., OKAMOTO Bull. Agr. Expt. Sta. Chosen 1 1922.

*Perla* (*Oyamia*) *coreana* sp. n. pp. 45–50, OKAMOTO Trans. Sapporo Nat. Hist. Soc. 8 1921.—*P. abdominalis* morphology & biology p. 229 figs., SAMAL Ann. Biol. lacustre 12.—*P. abdominalis* notes on, LESTAGE Ann. Biol. lacustre 12.

*Rhabdiopteryx japonica* p. 12, *no-hirae* p. 14, *0-notata* p. 15 spp. n. Japan figs., OKAMOTO Bull. Agr. Expt. Sta. Chosen 1 1922.

*Rhopalopsole subnigra* p. 42, *japonica* p. 43 spp. n. Japan figs., OKAMOTO t.c.

*Spaniocerca* gen. n. *zelandica* sp. n. N. Zealand p. 217, fig., TILLYARD Trans. N. Z. Inst. 54.

*Takagripopteryx* gen. n. (near *Paranoto-perla*) p. 3, *nigra* sp. n. Japan p. 4 fig., OKAMOTO Bull. Agr. Expt. Sta. Chosen 1 1922.

*Zelandobius* gen. n. for *Leptoperla confusa* Hare, *furcillatus* p. 207, *unicolor* p. 208 spp. n. N. Zealand figs., TILLYARD Trans. N. Z. Inst. 54.

*Zelandoperla* gen. n., key, *decorata* p. 212, *fenestrata* p. 214, spp. n. N. Zealand figs., TILLYARD t.c.

*Taoniopteryx* fam. p. 189.

## ZORAPTERA.

*Zorotypus manni* sp. n. Bolivia p. 60, CAUDELL Proc. Ent. Soc. Wash. 25.

*Centroptilum fragile* p. 42, *curiosum* p. 43 spp. n. Ontario, McDUNNOUGH Can. Ent. 55.

*Chirotonetes japonicus* sp. n. p. 59 fig., ULMER Arch. Natg. 85 A 11 1920.

*Chitonophora krieghoffi* sp. n. Thüringia p. 41 fig., ULMER t.c.

*Cinygma tibiale* sp. n. Asia Minor p. 78 figs., ULMER t.c.

*Cloeon fluviatile* sp. n. New Guinea p. 54 fig., ULMER Arch. Natg. 85 A 11 1920.—*C. rubropicta* p. 43, *ingens* p. 44, *punctiventris*, *chlorops* p. 45, *virilis* p. 46 spp. n. Canada, McDUNNOUGH Can. Ent. 55.—*C. viridellum* sp. n. Belgian Congo fig. p. 193, LESTAGE Rev. zool. afr. 11.

*Deleatidium laminatum* sp. n. Chile p. 23 fig., ULMER Arch. Natg. 85 A 11 1920.

*Eatonica schoutedeni* systematics p. 301, LESTAGE Rev. zool. afr. 11.

*Ecdyonurus bengalensis* sp. n. p. 75 fig., ULMER Arch. Natg. 85 A 11 1920.—*E. forcipula* early stages p. 49 figs., GROS Ann. Biol. lacustre 12.

*Ecdyurus ramaleyi* sp. n. Colorado p. 101 fig., DODDS Trans. Amer. Ent. Soc. 49.

*Ephemera formosana* Formosa p. 6, *purpurata* China p. 8 spp. n. figs., ULMER Arch. Natg. 85 A 11 1920.

*Ephemerella coloradensis* sp. n. Colorado p. 98 fig., DODDS Trans. Amer. Ent. Soc. 49.—*E. ignita* anatomy of larval gills pp. 439–614 figs., DÜRKEN Zool. Jahrb. Abt. Anat. 44.

*Habrophlebiodes* gen. n. for *Habrophlebia americana* Bks. p. 39 fig., ULMER Arch. Natg. 85 A 11 1920.

*Hagenulodes* gen. n. p. 37, *braueri* sp. n. Seychelles p. 38 figs., ULMER t.c.

*Hagenulopsis* gen. n. diptera sp. n. Brazil p. 34 figs., ULMER t.c.

*Heptagenia mexicana* p. 70, *chinensis* p. 73 spp. n. figs., ULMER t.c.

*Ichthybotus bicolor* sp. n. N. Zealand p. 228 fig., TILLYARD Trans. N. Z. Inst. 54.

*Iron tollandi* sp. n. Colorado p. 109 fig., DODDS Trans. Amer. Ent. Soc. 49.

## EPEMEROPTERA.

Paedogenesis in Ephemeridae, GROS Ann. Sci. nat. (Zool.) (10) 6 p. 411.

Catalogue of Ephemeroptera of France, LESTAGE Ann. Soc. ent. Fr. 91 pp. 273–276.

Biological and morphological notes on Plectoptera, MERTENS Arch. Natg. Abt. A 89 Heft 2 pp. 1–38 18 figs.

Wing venation of Plectoptera p. 143 (figs.), TILLYARD J. Linn. Soc. (Zool.) 35.

*Ameletus velox* sp. n. Colorado p. 105 fig., DODDS Trans. Amer. Ent. Soc. 49.—*A. validus* sp. n. Alberta p. 50 fig., McDUNNOUGH Can. Ent. 55.—*A. flavicinctus* sp. n. N. Zealand p. 226 fig., TILLYARD Trans. N. Z. Inst. 54.

*Atalophlebia simillima* p. 16, *lucida* p. 18, *fusca* p. 20 spp. n. Australia figs., ULMER Arch. Natg. 85 A 11 1920.

*Atopopus tibialis* sp. n. Philippines p. 66 fig., ULMER Arch. Natg. 85 A 11 1920.

*Baetis bicaudatus*, *intermedius* p. 110, *tricaudatus* p. 111, *quilleri*, *moffatti* p. 112, *minimus*, *parvus* p. 113, spp. n. Colorado figs., DODDS Trans. Amer. Ent. Soc. 49.—*B. phoebus*, *dardanus* p. 41, *nanus* p. 24 spp. n. Canada, McDUNNOUGH Can. Ent. 55.—*B. peruvianus* sp. n. p. 53 fig., ULMER Arch. Natg. 85 A 11 1920.

*Caenis* see *Ordella*.

*Callibaetis fusca*, *vitrea* spp. n. Colorado p. 100 figs., DODDS Trans. Amer. Ent. Soc. 49.

*Campsurus*, systematics & list of spp. pp. 113–124, LESTAGE Ann. Soc. ent. Belg. 63.—*C. truncatus* p. 2, *unguiculatus* p. 4 spp. n. (figs.) S. America, ULMER Arch. Natg. 85 A 11 1920.

*Leptohyphes costaricanus* Costa Rica p. 45, *peterseni* Brazil p. 46 (figs.) spp. n., ULMER Arch. Natg. 85 A 11 1920.

*Leptohyphodes* gen. n. for *Potamanthus inanis* Pict. p. 50, ULMER t.c.

*Leptophlebia separata* n. n. for *mollis* Etn. 1884 (nee Etn. 1871) p. 27, ULMER t.c.

*Melanemera* gen. n. p. 43, *brasiliiana* sp. n. p. 44 figs., ULMER t.c.

†*Mesoplectopteron* gen. n. *longipes* sp. n. Vosges p. 112 fig., HANDLIRSCH Verh. zool.-bot. Ges. Wien 68 1918.

*Metretopus balcanicus* sp. n. p. 68 fig., ULMER Arch. Natg. 85 A 11 1920.

*Mortogenesia* gen. n. for *Palingenia mesopotamica* Mort. p. 110, LESTAGE Ann. Soc. ent. Belg. 63.

*Ordella* n. n. for *Caenis* Steph., genotype *C. macrura* Steph. p. 518, CAMPION Ann. Mag. N. H. (9) 11.

*Palingenia mesopotamica* see *Mortogenesia*.

*Paraleptophlebia wernerii* sp. n. S. Austria p. 25 fig., ULMER Arch. Natg. 85 A 11 1920.

*Potamanthodes* gen. n. for *Potamanthus formosus* Etn. p. 11 fig., ULMER t.c.

*Povilla cambodjensis* sp. n. p. 6 fig., ULMER Arch. Natg. 85 A 11 1920.

*Pseudocloeon albinerve* sp. n. Chile p. 443, NAVÁS Rev. chil. Hist. nat. 25.—*P. camerunense* sp. n. p. 56 figs., ULMER Arch. Natg. 85 A 11 1920.

*Rhoënanthus magnificus* China p. 11 (fig.), *macedonicus* p. 14 spp. n., ULMER t.c.

*Siphlonuroides* gen. n. (near *Siphlonurus*) for *croesus* p. 48, *midas* p. 49 spp. n. Ontario figs., McDUNNOUGH Can. Ent. 55.

*Siphlonurus berenice, phyllis* spp. n. Canada p. 49 figs., McDUNNOUGH Can. Ent. 55.—*S. croaticus* sp. n. p. 64, ULMER Arch. Natg. 85 A 11 1920.

*Siphluriscus* gen. n. p. 61, *chinensis* sp. n. p. 62 figs., ULMER t.c.

†*Siphlurites* gen. n. p. 170, *explanatus* sp. n. p. 171 Colorado, COCKERELL Psyche 30.

*Thraulodes* gen. n. for *Thraulus laetus* Etn. p. 33, ULMER Arch. Natg. 85 A 11 1920.

*Thraulus erhardti* p. 28, *maculipennis* p. 30 spp. n. Brazil figs., ULMER t.c.

*Torleya belgica*, distribution p. 51, LESTAGE Bull. Soc. ent. Belg. 5.

*Tricorythodes* gen. n. for *Tricorythus explicatus* Etn. p. 51, ULMER Arch. Natg. 85 A 11 1920.

*Tricorythus atrata* sp. n. Quebec p. 39, McDUNNOUGH Can. Ent. 55.

*Tritogenesia* gen. n. *bibisica* sp. n. New Guinea p. 111, LESTAGE Ann. Soc. ent. Belg. 63.

## ODONATA

### (PARANEUROPTERA).

A list of Odonata collected in Tanganyika Territory, CAMPION Ann. Mag. N. H. (9) 12 p. 669 fig.

Classification and synonymy of Odonata of Ecuador, CAMPOS R. 75 pp., 3 plates 1922.

Revision of Indian Odonata pp. 36, 324, 659, keys pp. 48, 474, 741 figs., FRASER J. Bombay N. H. Soc. 29.

List of Odonata of the Darbhanga District, North Bihar p. 138, INGLIS J. Bombay N. H. Soc. 29.

Odonata of the Malay Peninsula pp. 319–333 figs., LAIDLAW J. Malayan Br. R. Asiat. Soc. 1.

Aeschninae of Burma and Lower Siam, LAIDLAW Proc. U. S. Nat. Mus. 62 art. 21 pp. 1–29 1 pl.

Labium of the Paraneuroptera (Odonata) LUCAS, Proc. S. London Ent. & N. H. Soc. 1922–23 pp. 57–63, 2 pls.

Odonata of Chile pp. 19–25 fig., MARTIN Rev. chil. Hist. nat. 25.

Odonata of Godbout, Quebec, WALKER Canad. Ent. 55 pp. 5–12.

Keys to genera of legion Gomphus, WILLIAMSON Occ. Pprs. Mus. Zool. Univ. Michigan no. 52 1918 p. 7 & no. 63 1919 p. 2.

*Aeschna grandis* nymph described p. 59 figs., LUCAS Lancs. Ches. Nat. 12 1919.

*Agriocnemis binocellata* sp. n.  
Bangkok, p. 233 figs., FRASER J. N. H.  
Soc. Siam 4 1922.

*Agriogomphus hamatus* sp. n. Colombia,  
p. 4 fig., no. 59 1918—see  
*Archaeogomphus*.

*Agrion puella* abnormalities p. 57,  
WADSWORTH Entomologist 56.

*Anax dubius* sp. n. Corea p. 45,  
LACROIX Ann. Soc. linn. Lyon 67 1921.

*Archaeogomphus* gen. n. p. 2, no. 63  
1919 WILLIAMSON Occ. Pprs. Mus.  
Zool. Univ. Michigan.—*A. furcatus* sp.  
n. Colombia & Venezuela p. 2, WILLIAM-  
SON op. cit. no. 134 1923.

*Brachydiplax malcolmi* sp. n. Bangkok  
p. 231, FRASER J. N. H. Soc. Siam 4  
1922.

*Ceriagrion auranticum* sp. n. Bangkok  
p. 236, FRASER J. N. H. Soc. Siam 4  
1922.

†*Eodichroma* gen. n. p. 397, *mirifica*  
sp. n. Eocene, Texas, p. 398 fig.,  
COCKERELL Amer. J. Sci. 5.

*Enallagma pallidum* sp. n. Maryland  
p. 202 fig., Root Ent. News 34.

*Erpetogomphus sabaleticus* sp. n.  
Colombia p. 1 fig., WILLIAMSON Occ.  
Pprs. Mus. Zool. Univ. Michigan no. 52  
1918.

*Erythemis* notes p. 1, key p. 8,  
*carmelita* sp. n. S. America fig. p. 10,  
phylogeny pp. 19–21, KENNEDY Univ.  
Mich. Mus. Zool. Misc. Publ. 11.

*Gomphidia fletcheri* p. 669, *williamsi*  
p. 670, *kodaguensis* spp. n. India  
p. 671 figs., FRASER J. Bombay N. H.  
Soc. 29.

*Gomphomacromia chilensis* sp. n.  
Chile p. 23, MARTIN Rev. chil. Hist. nat.  
25.

*Gynacantha* notes p. 3, key to  
American species p. 12, *laticeps* p. 26,  
*jessei* p. 33, *klagesi* p. 36, *litoralis* p. 44,  
*interioris* p. 46 spp. n. S. America figs.  
WILLIAMSON Univ. Mich. Mus. Zool.  
Misc. Pubn. 9.

*Hetaerina*, habitats of tropical,  
WILLIAMSON Occ. Pprs. Mus. Zool.  
Univ. Mich. no. 130 46 pp.

*Heterogomphus hannyngtoni* p. 674,  
*flavicolor* spp. n. India p. 678 figs.,  
FRASER J. Bombay N. H. Soc. 29.

*Indothemis limbata* subsp. n. *sita*  
Ceylon p. 29 fig., CAMPION Ann. Mag.  
N. H. (9) 11.

*Ischnogomphus* gen. n. p. 6, *jessei*  
sp. n. Colombia p. 10 fig., WILLIAMSON  
Occ. Pprs. Mus. Zool. Univ. Michigan  
no. 52 1918.

*Leucorrhinia dubia* nymph described  
p. 16 fig., LUCAS Lancs. & Ches. Nat. 13  
1920.

*Macromidia genialis* sp. n. Malaya  
p. 232, figs., LAIDLAW J. Malayan Br.  
R. Asiat. Soc. 1.

*Megaloprepus*, distribution, variation,  
habits and food pp. 129–135, 168–174  
fig., CALVERT Ent. News 34.—*M.  
caeruleatus, brevistigma*, variation p. 136,  
COCKERELL Ent. News 34.

*Notogomphus longus* Martin re-  
described p. 660, *lecythus* p. 664, *im-  
misericors* spp. n. E. Africa p. 667 figs.,  
CAMPION Ann. Mag. N. H. (9) 12.

†*Oploonaeschna staurophleboides* sp. n.  
Tertiary, Denmark p. 1, HENRIKSEN  
Medd. Geol. 6 no. 9 1922.

*Oxygomphus martininus* sp. n. Congo  
p. 48, LACROIX Ann. Soc. linn. Lyon 67  
1921.

*Palaeothemis* gen. n. (near *Hypothe-  
mis*) p. 30 for *tillyardi* sp. n. Burma  
p. 33 figs., FRASER Mem. Dept. Agr.  
India 8.

*Pantala hymenea*, naiad, pp. 36–37  
figs., KENNEDY Can. Ent. 55.

*Phyllogomphus helenae* sp. n. Sierra  
Leone p. 49, LACROIX Ann. Soc. linn.  
Lyon 67 1921.

*Pseudagrion siamensis* sp. n. Bangkok  
p. 235 fig., FRASER J. N. H. Soc. Siam 4  
1922.

*Pseudocopera trotteri* sp. n. Bangkok  
p. 237, FRASER t.c.

†*Tarsophlebiopsis* gen. n. *mayi* sp. n.  
Upper Jurassic of England p. 146 figs.,  
TILLYARD Geol. Mag. Lond. 60.

*Triacanthagyna* notes p. 3, key to  
American p. 12, *ditzleri* p. 19, *caribea*  
p. 22, spp. n. S. America figs., WILLIAM-  
SON Univ. Mich. Mus. Zool. Misc. Pubn.  
9.

*Williamsonia fletcheri* sp. n. Canada  
p. 96 fig., WILLIAMSON Canad. Ent. 55.  
—*W. lintneri*, history and distribution  
pp. 222–225, HOWE Psyche 30.

**ORTHOPTERA.**

The Orthoptera of Corsica, CHOPARD Ann. Soc. ent. Fr. **92** pp. 253–286 1 pl. 9 figs.

List of Orthoptera of Macedonia, with notes on habits and distribution (map), BURR, CAMPBELL & UVAROV Trans. Ent. Soc. **1923** pp. 110–169 fig.

Myology of Orthoptera p. 1 (figs.), CARPENTIER Mem. Acad. roy. Belg. (**2**) **7** fasc. 3.

Orthoptera from Armenia and the Caucasus, EBNER Casopis **20** pp. 5–13.

Notes on some French Orthoptera and Dermaptera, GRASSÉ Bull. Soc. ent. Fr. **1923** p. 81.

Orthoptera of the Pribilof Islands p. 140, HEBARD N. Amer. Fauna **46**.

Biological notes on Orthoptera of the Vosges, REMY Ann. Soc. linn. Lyon **69** p. 67.

List of Orthoptera of Hungary p. 7, SZILADY Rovart. L. **26** 1922.

**FORFICULIDAE.**

Studies in Indian Dermaptera, HEBARD Mem. Dept. Agr. India **7** pp. 195–242 3 pls.

Dermaptera of the Belgian Congo, BORELLI Rev. zool. afr. **11** pp. 412–434.

*Acrania bakeri* sp. n. Philippines p. 1, BORELLI Boll. Mus. Zool. Anat. comp. **35** no. 736 1921.

*Anisolabis australis* sp. n. S. Australia, p. 363 fig., TINDALE Trans. R. Soc. S. Australia **47**.

*Auchenomus robustus* sp. n. Borneo p. 7, BORELLI Boll. Mus. Zool. Anat. comp. Torino **35** no. 736 1921.

*Chaetospania fulvochracea* sp. n. Philippines p. 8, BORELLI op. cit. **38** no. 13.—*C. kurseongae* sp. n. N. Bengal p. 215 figs., HEBARD Mem. Dept. Agr. India **7**.—*C. minuta* sp. n. Borneo p. 4, BORELLI Boll. Mus. Zool. Anat. comp. Torino **35** no. 736 1921.

*Chelisoches brevipennis* sp. n. Philippines p. 12, BORELLI op. cit. **38** no. 13.

*Cranopygia pluto* sp. n. Burma p. 200 fig., HEBARD Mem. Dept. Agr. India **7**.

*Dendroketes punctatus* sp. n. Philippines p. 5, BORELLI Boll. Mus. Zool. Anat. comp. Torino **38** no. 13.

*Diplatys bicoloripes* sp. n. Central Prov. India p. 196 figs., HEBARD Mem. Dept. Agr. India **7**.—*D. mixtus* p. 1, *sublobatus* p. 3 spp. n. Philippines. BORELLI Boll. Mus. Zool. Anat. comp. Torino **38** no. 13.

*Eparchus inermis* sp. n. Assam p. 237 fig., HEBARD Mem. Dept. Agr. India **7**.

*Exyphus koorgensis* sp. n. India p. 218, figs., HEBARD t.c.

*Forficula lebongae* sp. n. Sikkim p. 226 fig., HEBARD t.c.

*Hamaxas versicolor* sp. n. Philippines p. 14, BORELLI Boll. Mus. Zool. Anat. comp. Torino **38** no. 13.

*Hypurgus uniformis* sp. n. Philippines p. 18, BORELLI t.c.

*Labia boettcheri* sp. n. Philippines p. 7, BORELLI t.c.

*Opisthocosinia (Ancistrogaster) poecilocera* Borg see *Sadiya*.

*Parapsalis* gen. n. p. 2, *laevis* sp. n. Borneo p. 3 fig., BORELLI Boll. Mus. Zool. Anat. comp. Torino **35** no. 736 1921.

*Pareparchus pelvimeter* sp. n. Coorg, India p. 236 fig., HEBARD Mem. Dept. Agr. India **7**.

*Prolebia recurva* sp. n. Belgian Congo p. 426, BORELLI Rev. zool. afr. **11**.

*Proreus fletcheri* sp. n. E. Bengal p. 221 figs., HEBARD Mem. Dept. Agr. India **7**.

*Prosadiya* gen. n. (near *Sadiya*) p. 233, *tricota* sp. n. Assam p. 234 fig., HEBARD t.c.

*Sadiya* gen. n. (near *Dinex* & *Thalperus*) p. 230, *grata* sp. n. Assam p. 232 fig. and (*Opisthocosmia*) *poecilocera* Borg p. 230, HEBARD t.c.

*Spongolabis testacea* sp. n. Belgian Congo p. 423, BORELLI Rev. zool. afr. **11**.

*Spongostox schoutedeni* p. 419, *burgeoni* p. 421 (with var. n. *longipennis* p. 422), Belgian Congo spp. n., BORELLI t.c.

*Thalpherus inermis* sp. n. Belgian Congo p. 431, BORELLI t.c.

## GRYLLOBLATTIDAE.

*Grylloblatta campodeiformis* in California p. 148, CAUDELL Canad. Ent. 55.

## BLATTIDAE.

Malayan Blattidae, descriptions, records, synonymy, figs., pp. 393-474, HANITSCH J. Malayan Br. R. Anat. Soc. 1.

Asymmetry in Blattidae, HANITSCH Treubia 3 pp. 218-221.

†New Blattoid wing from coal measures England, BOLTON Abs. Proc. Geol. Soc. London 1922-23 p. 93.

*Anaplecta vittata* sp. n. Singapore p. 396 fig., HANITSCH J. Malayan Br. R. Asiatic Soc. 1.

*Blatta germanica* leg muscles pp. 835 & 1318 figs., FONTES & VELOSO C.R. Soc. Biol. 88.

*Calolampra limbata* Singapore, *nitida* Sarawak, spp. n. p. 432, HANITSCH J. Malayan Br. R. Asiatic Soc. 1.

*Dolichosphaeria arcuata* p. 454 (fig.), *deplanata* p. 455 spp. n. Malay Peninsula, HANITSCH t.c.

*Dysclogamia chopardi* n. n. for *Miroblatta silphoides* Chop. p. 447, HANITSCH t.c.

*Ectobius lapponicus* subspp. n. *infumatus* p. 116, *balcani* p. 117, *erythronotus* f. n. *nigricans* p. 119, *lividus* subsp. n. *minor* p. 129, *corsorum* p. 130, *vitreus* p. 134, *kraussianus* p. 135 Europe, *togoensis* p. 137, *sjöstedti* p. 138 Togoland spp. n., RAMME Arch. Natg. Abt. A 89 Heft 7.

*Ellipsidion terminale* sp. n. New Guinea p. 201 fig., HANITSCH Treubia 3.

*Epilampra angusta* Java p. 204, *gjellerupi* New Guinea p. 205 spp. n. figs., HANITSCH Treubia 3.—*E. funebris* p. 427, *moultoni* p. 429 Borneo, *lyrata* p. 430 Malay Peninsula, spp. n. figs., HANITSCH J. Malayan Br. R. Asiatic Soc. 1.

*Liosilpha lata* p. 416, *longe-alata*, *picea* p. 417, spp. n. Malaya fig., HANITSCH t.c.

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*Methana dacrydii* p. 434, saundersi p. 435, spp. n. Malaya figs., HANITSCH t.c.

*Miroblatta silphoides* see *Dysclogamia chopardi*.

*Panesthia femoral spine variation* pp. 214-218, HANITSCH Treubia 3.—*P. shelfordi* sp. n. Sarawak p. 458 fig., HANITSCH J. Malayan Br. R. Asiatic Soc. 1.

*Periplaneta americana* abdominal structures pp. 85-93 fig., CRAMPTON Bull. Brooklyn Ent. Soc. 18.—*P. montana* sp. n. Perak p. 440 figs., HANITSCH J. Malayan Br. R. Asiatic Soc. 1.

*Phorticolea boliviæ* sp. n. Bolivia p. 28, CAUDELL Psyche 30.

*Phyllodromia abrupta* p. 399, *luteomarginata* p. 407, *ruberonigra* p. 412, *stellata* p. 413, spp. n. Malaya figs., HANITSCH J. Malaya Br. R. Asiatic Soc. 1.—*P. diagrammatica* sp. n. Dutch E. Indies p. 198 fig., HANITSCH Treubia 3.

*Platyzosteria denini* sp. n. Ceram p. 206 fig., HANITSCH Treubia 3.—*P. brunnea* ♂ described p. 362 fig., TINDALE Trans. Proc. R. Soc. S. Aust. 47.

*Prosoplecta dexteralleni* sp. n. Malaya p. 451 fig., HANITSCH J. Malayan Br. R. Asiatic Soc. 1.

*Protagonista pertristis* sp. n. Malaya p. 444 fig., HANITSCH t.c.

*Pseudophoraspis emarginata* sp. n. Sarawak p. 424 figs., HANITSCH t.c.

*Pseudophyllodromia sexpunctata* sp. n. Selangor 418 fig., HANITSCH t.c.

*Scabina horrida* sp. n. Borneo p. 207 fig., HANITSCH Treubia 3.

## MANTIDAE.

The Mantoidea of S. Dakota, SEVERIN 14th Ann. Rept. S. Dakota State Ent. 1923 p. 35.

Review of Australian Mantidae, TINDALE Rec. S. Aust. Mus. 2 pp. 425-457 11 pls. 4 figs.

*Amorphoscelis papua* sp. n. New Guinea p. 388, WERNER Treubia 3.

*Bolbe maia* N. Australia p. 437,  
*pallida* Central Australia p. 438 spp. n.,  
 TINDALE Rec. S. Aust. Mus. 2.

*Calidomantis diademata* Kamerun,  
*annulipes* E. Africa, spp. n. p. 273  
 WERNER Verh. zool.-bot. Ges. Wien 66  
 1916.

*Cliomantis dispar* sp. n. S. Australia  
 figs. p. 433, TINDALE Rec. S. Aust.  
 Mus. 2.

*Compsomantis robusta* sp. n. Borneo  
 p. 391 fig., WERNER Treubia 3.

*Compothespis marginipennis* sp. n.  
 E. Africa p. 256, WERNER Verh. zool.-  
 bot. Ges. Wien 66 1916.

*Coptopterix argentina* acclimatised in  
 Chile p. 20, REED An. Zool. aplic. 7  
 1920.

*Creobroter* key to species p. 403,  
 WERNER Treubia 3.

*Deiroharpax* gen. n., *viridis* Sikkim  
 p. 283, *hyalina* Sumatra p. 284, spp. n.  
 fig. WERNER Verh. zool.-bot. Ges.  
 Wien 66 1916.

*Echinomastoharpax* gen. n. for *bicin-  
 gulata* De Haan p. 281, WERNER Verh.  
 zool.-bot. Ges. Wien 66 1916.

*Empusa egena* biology p. 177 figs.,  
 BUGNION Mem. Soc. Vaud. Sci. nat.,  
 no. 5 1923.

*Entella denticollis* E. Africa p. 274,  
*ugandensis* Uganda p. 275, spp. n.  
 WERNER Verh. zool.-bot. Ges. Wien  
 66 1916.

*Ephierodula excellens* sp. n. Tonkin  
 p. 262 fig., WERNER Verh. zool.-bot.  
 Ges. Wien 66 1916.

*Glabromantis unicornis* sp. n. p. 430,  
 var. n. *pallidifemur* S. Australia,  
*melanica* sp. n. N. Australia p. 431 figs.,  
 TINDALE Rec. S. Aust. Mus. 2.

*Gretella* gen. n. (near *Statilia*) *gracilis*  
 sp. n. Java p. 394, WERNER Treubia 3.

*Hierodula cinctipes* Java p. 265,  
*fruhstorferi* Tonkin p. 266, *prosternalis*  
 Perak p. 267, spp. n. figs., WERNER  
 Verh. zool.-bot. Ges. Wien 66 1916.—  
*H. (Tamolanica) decipiens* sp. n.  
 New Guinea p. 399 fig., WERNER  
 Treubia 3.—*H. dentifrons* Stål see  
*Ngawala*.

*Iris deserti* sp. n. N. W. Africa p. 60  
 figs., UVAROV Nov. Zool. 30.

*Mantis religiosa* biology p. 177  
 (figs.), BUGNION Mem. Soc. Vaud.  
 Sci. nat. no. 5 1923.

*Ngawala* gen. n. (near *Sphodropoda*)  
 for *Hierodula dentifrons* Stål (*Sphodropoda*  
*dentifrons* Kirby) p. 447 figs., TINDALE  
 Rec. S. Aust. Mus. 2.

*Notomantis* gen. n. (near *Mantis*)  
*chlorophana* sp. n. W. Australia p. 451,  
 TINDALE t.c.

*Nullabora* gen. n. p. 442, *flavoguttata*  
 sp. n. S. Australia figs. p. 443, TINDALE  
 t.c.

*Orthodera ministralis* regeneration  
 of legs, p. 30, BLACKBOURN Vict. Nat.  
 38.

*Pachymantis* key p. 279, WERNER  
 Verh. zool.-bot. Ges. Wien 66 1916.

*Paraoxyphilus laticollis* S. & W.  
 Australia p. 426, *insularis* N. Australia  
 p. 427 spp. n. figs., TINDALE Rec. S.  
 Aus. Mus. 2.

*Parhierodula majuscula* sp. n. N.  
 Queensland p. 449 figs., TINDALE t.c.

*Phitrus orientalis* sp. n. E. Africa  
 p. 286, WERNER Verh. zool.-bot. Ges.  
 Wien 66 1916.

*Rhodomantis gracilis* sp. n. N.  
 Australia p. 444 fig., TINDALE Rec. S.  
 Aust. Mus. 2.

*Sibylla* key p. 285, WERNER Verh.  
 zool.-bot. Ges. Wien 66 1916.

*Sphodromantis* key p. 261, *rubrostigma*  
 E. Africa, *quinquecallosa* (no locality)  
 p. 260, spp. n., WERNER t.c.

*Sphodropoda viridis* S. Australia,  
*loripes* Queensland spp. n. p. 446 figs.,  
 TINDALE Rec. S. Aust. Mus. 2.—*S.  
 dentifrons* Kirby see *Ngawala*.

*Stenopyga reticulata* sp. n. E. Africa  
 p. 277, WERNER Verh. zool.-bot. Ges.  
 Wien 66 1916.

*Thorodia* gen. n. p. 452, *melanoptera*  
 sp. n. S. Australia and Victoria, *m.  
 subsp. n. major* S. Australia p. 453,  
 TINDALE Rec. S. Aust. Mus. 2.

*Toxodera denticulata*, notes on, East  
 Indies p. 65 (fig.), KARNY Tropische  
 Natuur 1923.

## PHASMIDAE.

Report upon the Phasmooidea of S. Dakota, SEVERIN 14th Ann. Rept. S. Dakota State Ent. 1923 p. 34.

Nomenclature of Phasmidae, KARNY Treubia 3 pp. 230-242.

*Bacillus gallicus*, teratological specimen p. 102, PIONNEAU Proc. Soc. linn. Bordeaux 73 1921.

*Battacus* gen. n. p. 267, schneideri sp. n. Sumatra p. 268, WERNER Verh. zool.-bot. Ges. Wien 68 1918.

*Battacini* tribe n. p. 267, WERNER t. c.

*Dixippus morosus* parthenogenesis and gynandromorphism p. 287, NACHTSHEIM Zs. indukt. abstammungslehre 30 p. 287.—*D. morosus* causes of colour modifications pp. 164-165, PRZIBRAM & BRECHER Anz. Ak. Wiss. Wien. 57 1920.

*Extatosoma tiaratum* notes on pp. 235-237, FROGGATT Austr. Nat. 4 1921.

*Manomera blatchleyi* n. race *atlantica* Staten Island N.Y. p. 52 figs., DAVIS J. N. Y. Ent. Soc. 31.

## GRYLLOIDAE.

*Myrmecophila acervorum*, biology p. 157, 204, SZABÓ-PATAY Allatt. Közlem. 15 1916.—*M. acervorum* true ♂ described pp. 116-125, ID. op cit. 11 1912.—*M. acervorum* subsp. n. *aequispina* France p. 30 fig., CHOPARD Bull. Soc. ent. Fr. 1923.

*Pholeogryllus* gen. n. (near *Opilionacris*) *geertsi* sp. n. Belgian Congo fig. p. 298, CHOPARD Rev. zool. afr. 11.

*Uvaroviella* gen. n. (near *Endacustes*) *cavicola* sp. n. Jamaica fig. p. 84, CHOPARD Bull. Soc. ent. Fr. 1923.

## TETTIGONIIDAE.

Malayan, Melanesian and Australian Tettigoniidae, records, synonymy, HEBARD, Proc. Acad. Nat. Sci. Philad. 74 1922 pp. 121-299.

Malayan Tettigoniidae, synonymy, redescriptions, distribution, KARNY J. Malayan Br. R. Asiat. Soc. 1 pp. 116-193.

*Acanthocoryphus mindanensis* sp. n. Philippines p. 227 figs., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Alloteratura* gen. n. p. 249, *penangica* (genotype) Penang p. 250, *bakeri* Philippines p. 251, *sandakanae* N. Borneo p. 253, spp. n. figs., HEBARD t. c.

*Anisoptera hungarica* sp. n. Hungary p. 38 figs., CZIKI Rovart. L. 26.

*Antaxius bouvieri* sp. n. Corsica p. 263 figs., CHOPARD Ann. Soc. ent. Fr. 92.

*Anthracites major* p. 217, *zebra* p. 218, *apoensis* p. 220, spp. n. Philippines figs., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Brunnea vrazil* see *Hapalophyllum*.

*Brunneriana* n. n. for *Microprion* Br. Watt. 1895 (nec Pict. & Sauss. 1892), *signatipes* sp. n. Ceylon p. 531 figs., UVAROV Ann. Mag. N. H. (9) 12.

*Caedicia gloriosa* sp. n. Queensland p. 166 figs., HEBARD Proc. Acad. Nat. Sci., Philad. 74 1922.

*Characta labuanae* sp. n. N. Borneo p. 180 fig., HEBARD t. c.

*Chloracantha* gen. n. p. 172, *lampra* sp. n. Queensland p. 173 figs., HEBARD t. c.

*Chloroxiphidion* subgen. n. see *Conocephalus*.

*Chondroderella* gen. n. *sexguttata* sp. n. Singapore p. 209 fig., HEBARD t.c.

*Cleandrus dyaka* p. 190, *colosseus* p. 192 spp. n. N. Borneo figs., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.—*C. hercules* sp. n. Borneo p. 168 fig., KARNY J. Malayan Br. R. Asiat. Soc. 1.

*Condylodera fumosa* sp. n. Ceylon p. 528 fig., UVAROV Ann. Mag. N. H. (9) 12.

*Conocephalus* (*Chloroxiphidion* subgen. n. for *javanicus* Redt.) p. 242, HEBARD Proc. Acad. Nat. Sci., Philad. 74 1922.

*Cratioma dilatatum* p. 165, *cruentatum* p. 166 spp. n. Malaya fig., KARNY J. Malayan Br. R. Asiat. Soc. 1.

*Cyphoderris monstrosa* variations and life-history pp. 225-230, BUCKELL Canad. Ent. 55.

*Cyrtaspis scutata* sound production p. 76, TEMPÈRE Proc. Soc. linn. Bordeaux 75.

*Dasyphleps karschi* n. n. for *Diaphlebus novae-guineae* Karsch (nec De Haan) p. 207, KARNY Zool. Meded. 5 1920.

*Diaphlebus novae-guineae* see *Dasyphleps karschi*.

*Diastella maculata* sp. n. New Guinea p. 169 fig., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Dicranocercus zamboangae* sp. n. Philippines p. 226 figs., HEBARD t.c.

*Dicranopsyla leopardina* sp. n. Malaya p. 152 fig., KARNY J. Malayan Br. R. Asiat. Soc. 1.

*Elbenia makilingae* p. 143, *serraticauda* p. 144, spp. n. Philippines figs., HEBARD Proc. Acad. Nat. Sci. Phil. 74 1922.—*E. fissa* p. 144, *fusca*, *bispinosa* p. 145, spp. n. Malaya figs., KARNY J. Malayan Br. R. Asiat. Soc. 1.

*Elmaea annamensis* Annam, p. 122, *lamellipes* Borneo p. 124, *bakeri* p. 125, *filicanda* p. 127 Philippines, spp. n. figs., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.—*E. moultoni* sp. n. Sarawak p. 136 fig., KARNY J. Malayan Br. R. Asiat. Soc. 1.—*E. brunneri* n. n. for *parumpunctata* Brunn. (nec Serville) Philippines, *parumpunctata* De Haan (= *curvicercata* Brunn.) p. 183, *malayica* n. n. for *pooefolia* Brunn. (nec De Haan) p. 184, KARNY Zool. Meded. 6 1920.

*Eppioides* gen. n. p. 212, *malaya* (genotype) p. 213 N. Borneo, *bicolor* p. 214, Singapore spp. n. figs., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Eremopedes spinosa* sp. n. Mexico p. 337, figs., HEBARD Proc. Cal. Acad. Sci. 12.

*Euanisous* gen. n. for *Xiphidiopsis teuthroides* Bol. p. 262, HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Euhexacentrus* gen. n. for *Hexacentrus annulicornis* St. p. 270 figs., HEBARD t.c.

*Eulopophyllum* gen. n. *thaumasium* sp. n. N. Borneo p. 160 figs., HEBARD t.c.

*Eumecopoda* gen. n. for *Mecopoda cyrtosalis* Karsch p. 182, *reducta* sp. n. Philippines p. 183 fig., HEBARD t.c.

*Eumegalodon vaginatus* p. 187, *intermedius* p. 189, spp. n. Malay Pen. figs., KARNY J. Malayan Br. R. Asiat. Soc. 1.

*Gonyatopus gemmiculus* sp. n. N. Borneo p. 201 figs., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Gryllacris singaporae* p. 121, *kledangensis* p. 127, *peraka* p. 129, *griffinii* p. 131, spp. n. Malay Pen. figs., KARNY J. Malayan Br. R. Asiat. Soc. 1.—*G. vitrea* p. 276, *nigrita* p. 278 N. Borneo, *annulicornis* p. 280, *macroxiphus* p. 282 Obi Is., Moluccas, spp. n., *punctipennis* subsp. n. *geminula* Obi Is. p. 279 figs., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Hapalophyllum* gen. n. for *Brunnea vراzi* Bol. p. 193, HEBARD t.c.

*Hexacentrus annulicornis* see *Euhexacentrus*.

*Himerta kinneari* sp. n. Bombay p. 651 fig., UVAROV J. Bombay Nat. Hist. Soc. 29.

*Holochlora fracticerca* sp. n. Perak p. 154 fig., KARNY J. Malayan Br. R. Asiat. Soc. 1.—*H. mindanao* p. 156, *maxima* p. 158, spp. n. Philippines figs., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Insara psaronota* sp. n. Mexico p. 332 figs., HEBARD Proc. Cal. Acad. Sci. 12.

*Leptophyes nuptialis* sp. n. Albania p. 37, KARNY Verh. zool.-bot. Ges. Wien 68 1918.

*Letana nigrosparsa* Walk. synonymy p. 651 UVAROV J. Bombay N. H. Soc. 29.

*Liotrachela cryptisema* p. 164, *iliganae* p. 165, spp. n. Philippines figs., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Lipotactes maculatus* sp. n. Singapore p. 267 fig., HEBARD t.c.

*Mecopoda* spp. see *Eumecopoda*.

*Medecticus goliath* sp. n. Galilee p. 33 fig., UVAROV Ent. Mo. Mag. 59.

*Metrioptera buxtoni* sp. n. Jerusalem p. 34, UVAROV Ent. Mo. Mag. 59.—*M. albopunctata* subsp. n. *monticola* Corsica p. 265 fig., CHOPARD Ann. Soc. ent. Fr. 92.

*Microcentrum suave* sp. n. Mexico p. 335 figs., HEBARD Proc. Cal. Acad. Sci. 12.

*Microprion* Br. Watt. 1895 (nec Pict. & Sauss. 1892) see *Brunneriana*.

*Mirollia aeta* Philippines p. 130, *cerciata* N. Borneo p. 131, spp. n. figs., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Morsimus albomarginatus* sp. n. N. Borneo p. 206 figs., HEBARD t.c.—*M. carinatus* synonymy p. 651, UVAROV J. Bombay N. H. Soc. 29.

*Mossula kiriwina* sp. n. Trobriand Is. p. 174 figs., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Neonetus variegatus* Br. redescribed p. 237, *huttoni* n. n. for *variegatus* Hutton p. 239, CHOPARD Trans. N. Z. Inst. 54.

*Nicsara dehaani* sp. n. New Guinea p. 165, KARNY Zool. Meded. 5 1920.—*N. taylori* p. 222, *philippina* p. 223, spp. n. Philippines figs., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Odontoconus robustus* sp. n. Singapore p. 186 fig., KARNY J. Malayan Br. R. Asiat. Soc. 1.

*Olcinia excisa* sp. n. Borneo p. 177 fig., KARNY t.c.

*Oxystethus dyaka* sp. n. N. Borneo p. 215 fig., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Pachyrhamma fascifer* anatomical details p. 232, CHOPARD Trans. N. Z. Inst. 54.

*Pachysagella* gen. n. p. 273, *maculata* S. Australia p. 274 figs., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Papuogryllacris obiensis* sp. n. Obi Is., Moluccas, p. 285 fig., HEBARD t.c.

*Paragnapha* gen. n. *insularis* sp. n. New Caledonia p. 110 fig., WILLEMSE Nova Caledonia A Zool. 3 1.

*Paragryllacris griffinii* sp. n. Queensland p. 284 fig., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Phaula luzonica* p. 147, *galeata* p. 149 spp. n. Philippines figs., HEBARD t.c.—*P. gigantea* sp. n. Malayan p. 147 fig., KARNY J. Malayan Br. R. Asiat. Soc. 1.

*Phisis obiensis* sp. n. Obi Is., Moluccas p. 264 fig., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Phlugis thaumasia* sp. n. Singapore p. 263 figs., HEBARD t.c.

*Pholidoptera signata* Br. (= *indistincta* Bol.) p. 157, EBNER Arch. Naturg. 85 A 10.

*Phyllomimus punctiger* sp. n. Malay p. 171 fig., KARNY J. Malayan Br. R. Asiat. Soc. 1.—*P. tonkinae* sp. n. Tonkin p. 198 fig., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.—*P. zebra* sp. n. Borneo p. 176, KARNY Zool. Meded. 5 1920.

*Phyllozelus abbotti* sp. n. Singapore p. 200, HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Platyaedicia* gen. n. p. 167, *obiensis* sp. n. Obi Is., Moluccas, p. 168 figs., HEBARD t.c.

*Platycleis grisea* f. n. *mirabilis* Italy p. 167, RAMME Arch. Natg. Abt. A 89 Heft 7.

*Pleioptlectron cavernae* redescribed, CHOPARD Trans. N. Z. Inst. 54.

*Plicigera* gen. n. p. 651, *himalayana* sp. n. Punjab p. 652 (fig.), UVAROV J. Bombay N. H. Soc. 29.

*Poecilimon berlandi* sp. n. Macedonia p. 148 fig., UVAROV Trans. Ent. Soc. 1923.

*Prohimerta* gen. n. p. 133, *annamensis* sp. n. Annam p. 134 figs., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Pseudopsyla* gen. n. *mirabilis* sp. n. Penang p. 155 figs., HEBARD t.c.

*Psyra brunneri* n. n. for *ensis* Brunner (nec De Haan) pp. 192, 210, KARNY Zool. Meded. 5 1920.—*P. obliteratea* p. 148 Selangor, *punctulata* p. 149 Sarawak, *peraka* p. 151 Perak, spp. n. figs., KARNY J. Malayan Br. R. Asiat. Soc. 1.

*Pterochroza uniexcisa* sp. n. S. America p. 1349 figs., VIGNON C.R. Acad. Sci. Paris 176.

*Pyrgocorypha philippina* sp. n. Philippines p. 236 fig., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Raphidophora dehaani* sp. n. Sumatra p. 142, KARNY Zool. Meded. 5 1920.

*Salomona nigrifrons* sp. n. Loyalty Is. p. 109, WILLEMS Nova Caledonia A Zool. 3 1.—*S. nigripes* New Guinea p. 229, *guamensis* Guam p. 232, *lita* Obi Is. p. 233, spp. n. figs., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Scambophyllum albomarginatum* p. 136, *sandakanae* p. 137 figs. N. Borneo spp. n., HEBARD t.c.

*Segestes frater* sp. n. Obi Is., Moluccas, p. 177 figs., HEBARD t.c.

*Segestidea soror* sp. n. Obi Is., p. 178 figs., HEBARD t.c.

*Steiroxys hendersoni* sp. n. Utah p. 1 fig., CAUDELL Proc. U. S. Nat. Mus. 62 art. 22.

*Stenopelmatus* biology pp. 73–77, DUNCAN Ent. News 34.

*Steropleurus elegans* sp. n. Corsica p. 266 figs., CHOPARD Ann. Soc. ent. Fr. 92.—*S. dyrrhachiacus* sp. n. Albania p. 36, KARNY Verh. zool.-bot. Ges. Wien 68 1918.

*Stibaroptera major* sp. n. Malaya p. 160 fig., KARNY J. Malayan Br. R. Asiat. Soc. 1.

*Stictophaula* gen. n. *bakeri* (genotype) p. 150, *quadridens* p. 152, *micra* p. 153, spp. n. Singapore figs., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Subria moultoni* sp. n. Sarawak p. 184 fig., KARNY J. Malayan Br. R. Asiat. Soc. 1.

*Sympaestria brevicauda* Penang p. 157, *genualis* Selangor, *triramosa* Sarawak p. 158, spp. n. figs., KARNY t.c.—*S. lampra* sp. n. N. Borneo p. 161 figs., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Tanusia rubrocellata* sp. n. p. 1349 fig., VIGNON C.R. Acad. Sci. Paris 176.

*Tapiena cerciata* sp. n. Philippines p. 140 figs., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.—*T. ensigera* p. 140, *bullata* p. 141, *pentagona*, *emarginata* p. 142 Malaya, *incisa* p. 141 Sarawak, spp. n. figs., KARNY J. Malayan Br. R. Asiat. Soc. 1.

*Terpandrus splendidus* sp. n. W. Australia p. 272 fig., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.

*Togona philippina* sp. n. Philippines p. 205 fig., HEBARD t.c.

*Troglophilus neglectus* scent-producing organ p. 253, SELISKAR Zool. Anz. 57.

*Uromenus confusus* subsp. n. *insularis* Corsica p. 266, CHOPARD Ann. Soc. ent. Fr. 92.

*Weta* gen. n. *thomsoni* sp. n. New Zealand p. 234 fig., CHOPARD Trans. N. Z. Inst. 54.

*Xiphidiopsis* restricted p. 253, *dicerca* p. 254, *cryptosticta* p. 256 Singapore, *drepanophora* p. 257, *gemmaicula* p. 259, *aglaia* p. 261 Philippines spp. n. figs., HEBARD Proc. Acad. Nat. Sci. Philad. 74 1922.—*X. forficula* p. 529, *greeni* spp. n. Ceylon p. 530 figs., UVAROV Ann. Mag. N. H. (9) 12.—*X. cyclolobia* p. 179, *mirabilis* p. 180, spp. n. Malaya figs., KARNY J. Malayan Br. R. Asiat. Soc. 1.

*Zatricaptrion* gen. n. *reticulatus* sp. n. Selangor p. 173 figs., KARNY t.c.

#### ACRIDIDAE.

Taxonomy, development and life-history of certain Acrididae, CAROTHERS Trans. Amer. Ent. Soc. 49 pp. 7–24 (fig.).

Egg-masses of locusts, descriptions and identification, keys, BEZRUOKO Bull. Siberian Ent. Bur. no. 2 pp. 25–37.

Preliminary list of Acrididae from China, CHANG China J. Sci. and Arts 1 p. 486.

The development of certain Acrididae, KULAGIN Bull. Soc. ent. Moscou 2 pp. 1–11.

Acrididae from Central Africa, SJÖSTEDT Ark. Zool. 15 no. 6 39 pp.

Acrididae of Colombia, HEBARD Trans. Amer. Ent. Soc. 49 pp. 165–313, 3 pls.

North American Acrididae, REHN Trans. Amer. Ent. Soc. 49 pp. 43–92 figs.

Revision of Old World Cyrtacanthacrinini, keys to genera and spp. pp. 137, 473 figs., UVAROV Ann. Mag. N. H. (9) 11.

Synonymy of Indian Acrididae p. 643, UVAROV J. Bombay N. H. Soc. 29.

Locusts of economic importance, UVAROV Bull. Ent. Res. 14 pp. 31–39.

Keys to genera of Indo-Malayan Acrididae, WILLEMSE Zool. Med. Leiden 6 1921 pp. 4-20.

*Acridium gyldenstolpei* sp. n. Belgian Congo p. 29, SJÖSTEDT Ark. Zool. 15 no. 6.—*A. andeanum* sp. n. Colombia p. 173 fig., HEBARD Trans. Amer. Ent. Soc. 49.—*A. flaviventre* Burm. see *Schistocerca gregaria* ph. *flaviventris*.—*A. schistocercoides* see *Rhadinacris*.—*A. violascens* and *vinosa* see *Pachyacris*.—*A. nigricorne* see *Valanga*.

*Acridoderes laevigatus* see *Anacridoderes*.—*A. amethystinus* see *Pachynotacris*.

*Aeolopus dubia* sp. n. New Caledonia, Loyalty Isl., N. Hebrides, p. 100, WILLEMSE Nova Caledonia, A. Zool. 3 1.—*A. thalassinus* subsp. n. *kivuensis* Belgian Congo p. 18, SJÖSTEDT Ark. Zool. 15 No. 6.

*Agriacris brunnea* sp. n. Colombia fig. p. 221, HEBARD Trans. Amer. Ent. Soc. 49.

*Amblytropidia insignis* sp. n. Panama p. 198 fig., HEBARD t.c.

*Anacridium* gen. n. for *Gryllus* (*Locusta*) *aegyptius* p. 487 figs., UVAROV Ann. Mag. N. H. (9) 11.

*Anacridoderes* gen. n. for *Acridoderes laevigatus* p. 476, UVAROV Ann. Mag. N. H. (9) 11.

*Aristia bicolor* p. 261, *oxycodia* p. 263 spp. n. Colombia figs., HEBARD Trans. Amer. Ent. Soc. 49.

*Batrachidea inermis* sp. n. Colombia p. 174 fig., HEBARD t.c.

*Birungocoptacula* gen. n. (near *Paracoptacula* Karsch) p. 31, *gyldenstolpei* sp. n. Belgian Congo p. 33 fig., SJÖSTEDT Ark. Zool. 15 no. 6.

*Brachycercus* synonymy p. 518, CAMPION Ann. Mag. N. H. (9) 11.

*Bryodema tuberculata* life-history p. 61 fig., PONGRACZ Rovart. L. 26.

*Bryophyma* gen. n. for *Cyrtacanthacris debilis* p. 480 (with *picta* subsp. n.) p. 481 Uganda figs., UVAROV Ann. Mag. N. H. (9) 11.

*Caenomastax* gen. n. (near *Paramastax*) p. 189, type *insignis* p. 192, *atopa* p. 190 spp. n. Colombia figs., HEBARD Trans. Amer. Ent. Soc. 49.

*Caledonia* gen. n. *fuscovittata* sp. n. New Caledonia p. 103 fig., WILLEMSE Nova Caledonia, A. Zool. 3 1.

*Cardenius guttatus* sp. n. Kenya p. 681, UVAROV Ann. Mag. N. H. (9) 11.

*Cataloipus cymbiferus* var. n. *fuscoeruleipes* Belgian Congo p. 38 fig., SJÖSTEDT Ark. Zool. 15 no. 6.

*Catantops simplex* sp. n. Uganda & E. Africa p. 689, UVAROV Ann. Mag. N. H. (9) 11.

*Catantopsis taeniolatus* subsp. n. *ugandanus* Uganda & Tanganyika Terr. p. 687, UVAROV t.c.

*Chibchacris* gen. n. (near *Chlorus* G.T.) p. 286, *casenare* p. 287, *digitifera* p. 289, *furcata* (type) p. 291 spp. n. figs., and (*Pezotettix*) *varicolor* Stål, Colombia, HEBARD Trans. Amer. Ent. Soc. 49.

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